REPORT RESUMES

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CONFERENCE ON DEVELOPMENT OF CROSS-NATIONAL RESEARCH ON THE EDUCATION OF CHILDREN AND ADOLESCENTS.

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NINE FOREIGN RESEARCH CENTERS AND 9 UNITED STATES RESEARCH CENTERS WERE REPRESENTED BY 24 INVESTIGATORS AT A CROSS-NATIONAL CONFERENCE IN CHICAGO, ILLINOIS, ON FEBRUARY 20-28, 1964. OBJECTIVES OF THE CONFERENCE WERE--(1) TO EXAMINE THE IMPLICATIONS OF CONTEMPORARY RESEARCH FOR EDUCATION, (2) TO PLAN NEW PROJECTS WITH PARTICULAR RELEVANCE FOR EDUCATION, AND (3) TO COMMUNICATE THE RESULTS OF THIS CONFERENCE TO A WIDER AUDIENCE IN ORDER TO STIMULATE INTEREST AND ADDITIONAL RESEARCH. A WORK GROUP ON CHILD-REARING PRACTICES SUGGESTED THAT THE PROBLEM OF OBTAINING COMPARABLE CROSS-NATIONAL DATA IN A SYSTEMATIC WAY BE APPROACHED BY SETTING UP TWO KINDS OF STRUCTURES UNDER INTERNATIONAL SPONSORSHIP--(1) A FEDERATION OF 7 TO 12 NEWLY DEVELOPED RESEARCH FACILITIES IN STRATEGICALLY SELECTED AREAS OF THE WORLD, AND (2) A RELATED, BUT MORE LOOSELY FEDERATED, AND PROBABLY LESS RECIPROCALLY OPERATED, STRING OF ABOUT 30 RESEARCH FACILITIES IN ALREADY EXISTING CENTERS OF LEARNING AND RESEARCH. THE WORK GROUP ON DEVELOPMENT OF SOCIAL ATTITUDES DEVELOPED A PLAN FOR CROSS-CULTURAL INVESTIGATION TO BE INSTITUTED IN THE UNITED STATES, GERMANY, ITALY, MEXICO, BRAZIL, AND POSSIBLY ENGLAND ON VARIOUS SPECIFIED AREAS OF BEHAVIOR. THE WORK GROUP ON COGNITIVE DEVELOPMENT DISCUSSED CURRENT RESEARCH PROJECTS PERTAINING TO DEVELOPMENT OF THE CHILD'S COGNITIVE FUNCTIONING AND VALUE CONCEPTS. (JM)

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Conference on Development of Cross-National Research on the Education of Children and Adolescents

Cooperative Research Project No. ~~0~~G-015

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U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
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THE UNIVERSITY OF CHICAGO

CONFERENCE ON DEVELOPMENT OF CROSS-NATIONAL RESEARCH ON THE EDUCATION OF CHILDREN AND ADOLESCENTS

Cooperative Research Project No. ~~0~~G-015

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October, 1964

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INTRODUCTION

This is a report of a conference organized to explore, document and extend the contribution of cross-national and cross-cultural research to educational theory and practice.

Basic research in educational and learning processes has increased rapidly in the last few years, and this growth is likely to continue for some time. One of the features of this expansion of basic inquiry is the participation of a number of persons and disciplines traditionally not professionally concerned with education, at least at pre-college levels. The field of education is now drawing more widely than ever, from a variety of sources, for information and theory about psycho-social development of children and the processes through which they acquire knowledge and behavior.

The Cross-National Conference on Childhood and Adolescence was held at the Center for Continuing Education, University of Chicago, February 20-28, 1964. Twenty-four investigators with experience and interest in cross-national research attended the conference, representing nine research centers outside the United States and nine United States research centers.* The purpose of the conference was to bring the results of cross-national investigation in child and adolescent behavior more directly to bear upon education. More specifically, the objectives of the conference were these:

1. to examine the implications of contemporary research for education;
2. to plan new projects with particular relevance for education;
3. to communicate the results of this conference to a wider audience in order to stimulate interest and additional research.

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*See the Conference "Who's Who", Appendix, p. 46.

With these specific goals in mind the members of the group were also aware that the problems of education and literacy are international and that all available resources must be utilized in the attempt to promote rationality, knowledge, understanding and self-discipline in human interaction.

Intended to provide opportunity for planning and discussion, the conference was scheduled for working rather than paper-reading sessions. The participants of the conference were organized into three groups which met in separate sessions much of each day during the meetings. One of these groups, chaired by Robert J. Havighurst, was concerned with studies of the development of social attitudes and behavior; a second group, chaired by Robert A. LeVine, represented studies of child rearing; a third group, chaired by Robert D. Hess, focused upon studies of cognitive development and communication.

This report summarizes the discussion of these three groups, their several reports to the full conference and the exchanges generated by these reports. It also includes three formal papers presented by members of the conference at a joint meeting with the American Educational Research Association and the Comparative Education Association.**

Some of the results of these planning sessions are already apparent, even before the final report is completed. The group concerned with social attitudes has developed the conceptual framework of a research plan and the project design and instruments needed to implement the proposal. The group will meet in a planning conference late in 1964. The pilot phase of this project is already underway.

Members of the child rearing section of the conference are making arrangements to meet for the purpose of developing further their suggestion for an

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**See Basil Bernstein, "Elaborated and Restricted Codes: Their Origins and Some Consequences," Appendix p. 1; Ernest Boesch, "Information and Motivation," Appendix p. 24; William Lambert, "Some Recent Trends in the Study of Child Rearing and Their Implications for Educational Practice," Appendix p. 33.

international pattern of research stations.

In addition to these efforts that spring directly from the conference, several other projects are in planning stages and other research liasons have developed. One group, Leigh Triandis, Marcello Cesa-Bianchi, Terry Prothro, Hiroshi Wagatsuma and Robert Hess, have recruited two additional non-conference investigators, B. Kuppuswamy of the India International Centre and Akira Hoshino of the International Christian University of Japan, and are proposing a study of the socialization of compliance, aggressive behavior and internalization of adult rules and norms. Basil Bernstein and Robert Hess have proposed to a foundation a plan for joint analysis of data from the Chicago and London studies and exchange of project staff. Frederick Lighthall is having several sets of his concept attainment tasks reproduced for use by other investigators, including Ernest Boesch, who sees both clinical and cross-cultural applications of the tasks. Mary Ellen Goodman has included in her family observations variables directly related to conditions which she and Frederick Lighthall expect to reflect the socialization of planning and deliberative tendencies in children.

Undoubtedly other ties and joint undertakings have been established which have not been brought to our attention. The impact of the conference upon the participants is already clearly significant. We hope that the effect of the meetings will spread to a wider circle of investigators and other colleagues.

We are particularly grateful to Helen C. Bayley and Roberta Reb, who managed the many organizational details involved in planning and holding the conference and preparing this report. In addition, the assistance of Mrs. Ruth Vogeler during the conference in meeting the heavy demands on time and energy was invaluable.

A word of appreciation is due the thirteen graduate research trainees+ of the Committee on Human Develop-

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+Gary Davis, Mac Eaton, Gene Fox, Constance Fries, Else Hjertholm, Mary Lou Lionells, Mrs. Nancy McGowen, Roberta Meyer, Carl O'Nell, Suzanne Prescott, Elliot Simon, Mrs. Judy Torney, Leonard Unterberger.

ment and the Department of Anthropology, who attended the meetings of the conference as recorders and prepared daily reports of the discussions for circulation. Their work facilitated communication between the separate work groups and contributed measurably to the exchange of ideas and research plans. Our thanks go also to the staff of the Center for Continuing Education for their helpful cooperation in coordinating the many details involved in the conference.

WORK GROUP ON
CHILD REARING PRACTICES

Robert A. LeVine, Ph.D. (Chairman); Remi Clignet, Ph.D.; William Lambert, Ph.D.; Professor E. Terry Prothro; Beatrice B. Whiting, Ph.D.; John W.M. Whiting, Ph.D.

The need for a coordinated approach to cross-national research has become a major consideration in the planning of studies in child rearing and development. The Child Rearing group has formulated a proposal for approaching the problem of obtaining comparable cross-national data in a systematic way.

A Strategy for Facilitating Comparative Studies in Child Rearing and Development

Research Designs in Child Rearing Studies

The earliest comparative research in child rearing, such as Mead's Coming of Age in Samoa[1], was comparative only in the sense of being carried out by an investigator working in a society other than his own and reported to a considerably wider audience than the Samoans themselves. Although Dr. Mead used her data to refute the hypothesis that adolescence is always stressful, this hypothesis was phrased in such a way that it could be jeopardized by a single case. Such fragile hypotheses in the form "That X always occurs" or "That X never occurs" are not as fruitful or informative, we believe, as those hypotheses which state contingencies between variables. Such variable contingency hypotheses cannot be tested by the single case, the crucial experiment, except in an experimental design where all variables except the one whose effect is specified in the hypothesis are rigidly controlled.

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[1] Mead, Margaret, Coming of Age in Samoa: A Psychological Study of Primitive Youth for Western Civilization. New York: W. Morrow and Company, 1928.

Experimental procedures such as this are impossible by definition in naturally occurring instances, such as the customs of a set of adolescents in three Samoan villages. Dr. Mead's study and the others reporting child rearing practices in many corners of the world are thus primarily descriptive and illustrative. Taken together they form the empirical inductive base for developing a science. Each study can be entered along with others as a case for the testing of variable contingency hypotheses, where variables are controlled statistically rather than experimentally. Taken alone, the single case thus can refute hypotheses only of this fragile form. Its value with regard to illuminating variable contingency hypotheses comes only when it is combined with a large enough sample of other similar cases on which there is evidence on the relevant variables to jeopardize adequately the hypothesis.

In the history of comparative child rearing studies, it soon became apparent that the unplanned accumulation of cases had a major defect. Each investigator was interested in a somewhat different set of variables and furthermore used different methods of data collection. The work of Kardiner and Linton[2] was an attempt to provide data on a set of cultures using a common conceptual scheme. The Indian Education Project[3] in which Professor Havighurst played a major role went the next step. For the first time in a comparative study of child rearing and development, the same instruments were used across cultures.

Although this represented a signal advance in that cases were more comparable, the *ceteris paribus* problem was not solved. Although one could be reasonably confident that the societies were in fact similar or different on the dimensions reported, in neither of these projects did the number of cases make it possible to interpret any variable contingencies. Although it could be reported that Navaho children scored higher than Zuni children on the same test it was impossible to know whether this was a consequence of differences in economy, social structure, settlement pattern, physical type, diet or any other one of the myriad ways in which these two cultures differ from one another.

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[2] Kardiner, A., *Psychological Frontiers of Society*. New York: Columbia University Press, 1945.

[3] Havighurst, R. and Neugarten, B., *American Indian and White Children*. Chicago: University of Chicago Press, 1955.

The notion of using individual children within different cultures to replicate variable contingency hypotheses is the next step in design improvement for comparative research. This design was used, for example, in the Harvard Values Project[4], in Terry Prothro's child rearing studies in Lebanon[5], and in the Six Culture Study.[6] Apart from the relative efficiency of this method for testing hypotheses cross-culturally, it has the virtue of requiring replication, a procedure that is taken for granted in the more advanced sciences but is seldom done in the field of child development. Despite the apparent advantages of this design, it still does not entirely get around the problem of interpretation that has been inherent in methods previously discussed. If each replication shows the same relationship between the relevant variables we are more and more certain of the validity of our hypothesis. If, however, the variables are not related to one another in the expected manner we cannot interpret this failure. Thus the relation between mother's attitude toward dependency and the child's dependency as reported by her was shown by Prothro in Lebanon to differ from that shown in the New England sample studied by Sears, Maccoby and Levin.[7] This failure could be plausibly attributed to linguistic, cultural, climatic, dietary, or even genetic differences.

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[4] Whiting, J.W.M., Antonovsky, M.F., Chasdi, E.M. and Ayres, B.C., "The Learning of Values." In E.Z. Vogt and J.M. Roberts (Eds.) Peoples of Rimrock. Final Report of the Harvard Values Project, unpublished.

[5] Prothro, E.T., Child Rearing in the Lebanon. Cambridge, Mass.: Harvard University Press, 1961.

[6] Whiting, Beatrice (Ed.), Six Cultures: Studies of Child Rearing. New York: Wiley, 1963.

[7] Sears, Robert, Maccoby, Eleanor and Levin, Harry, Patterns of Child Rearing. Evanston, Illinois: Row, Peterson and Company, 1957.

From these considerations we feel that we should take another step forward in research design. We would like to recommend the strategy suggested by Lambert[8] in his opening paper. This strategy suggests the replication of studies in enough different cultures so that failures are interpretable. We suggest that thirty replications is probably a minimum number for this purpose.

In choosing such a sample of thirty groups, one should take into consideration a number of stratifying variables which have been found (in comparative studies based on ethnographic literature) to be related to variations in patterns of child rearing. Types of basic economy, ecology, settlement pattern, household structure, degree of social complexity, religion, the presence of a formal school system and the status of women are some of the most important of such variables. Some illustrations follow.

Physical environment. Large comparative studies indicate that altitude, the nature of the local terrain and temperature influence social structure and child rearing practices. It has been shown in recent research, using a sample of 150 societies, that if the average winter temperature falls below 32° a mother sleeps with her husband and the baby has a crib or cradle of its own. In warmer climates the mother sleeps with the baby and the husband has a bed or even room or house of his own. Variations in sleeping arrangements are associated with different degrees of intimacy between mother and infant, with different patterns of dependency weaning, and perhaps with variations in cognitive style.

Settlement pattern. Settlement patterns in mountainous areas differ from those on broad alluvial plains or in narrow river valleys. The arrangement of houses in space determines patterns of social interaction among the adults as well as the nature and composition of play groups. The mother who raises her child in the isolated homestead has different habits from the mother in a small compact hamlet or farm village or the mother in a crowded city.

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[8] Lambert, William, "Some Recent Trends in the Study of Child Rearing and Their Implications for Educational Practice." Paper presented at a joint session of the Cross-National Conference on Childhood and Adolescence and the American Educational Research Association, Chicago, February 21, 1964. (See Appendix).

Household structure. There can be no doubt that variations in household structure must be taken into consideration. In the Six Culture Study there was one African polygynous society with half the mothers living with their children in huts of their own and sharing a rotating husband with a co-wife. In Okinawa, one-third of the households were stem households, the father's parents owning the house. In Khalapur, India about two-thirds of the families were extended, including various combinations of families related in the patrilineal line. Among the Tarongans in the Philippines, most households were nuclear. In routine, however, they differed dramatically from the nuclear households in Orchard Town, New England. A woman in Tarong may be alone with her husband and children, but her house is usually within shouting distance of at least one of the child's grandparents and several aunts and uncles. A study of over fifty societies shows that aggression is more severely punished in extended households, that independence training is earlier in nuclear households, and that physical punishment is more prevalent in mother-child households.

One could enumerate several other stratifying variables which have been shown to be related to child rearing. In picking a sample the researcher may want either to control for these variables or to maximize diversity. The Six Culture Study did not select the societies with this strategy in mind. It is hoped that future studies will plan to do so.

Sampling Units

There has been a multiplicity of standards concerning units and universes for sampling in cross-cultural research on child rearing and development. Some investigators have used representative samples drawn from national populations; others have sampled from small communities without respect to representing a larger universe; still others have attempted to sample representative communities ("primary social units" in the Six Culture Study) rather than unconnected persons in the national population; finally, many investigators have taken availability samples from schools and other convenient locations, with only approximate group labels linking the group studied to a segment of the national population.

There is no a priori reason to believe that a single sampling strategy could not be universally agreed upon, and the advantages for comparability and cumulativeness in cross-cultural research would be enormous.

Although nations and cultures in the modern world are often not congruent, each nation may be divided into a number of culture-bearing segments which approximate what the anthropologist means by "cultures." The most general characteristic of such segments is that each one maintains the ideal that its members should not marry outside the segment. Although deviance from this ideal may be fairly widespread, the ideal itself is usually quite obvious to and agreed upon by members of the segment, and so long as the majority of members adhere to it, the segment can transmit its behavioral distinctiveness from generation to generation through the process of socialization. It is this behavioral distinctiveness, perpetuated through endogamy, which attracts the attention of the psychological researcher to units in the population defined by social status, religion, language, race and other attributes of "ethnicity." All the evidence of which we are aware indicates that most large national segments so defined manifest a surprisingly high degree of endogamy and hold tenaciously to their ideals opposing intermarriage.

Let us take the United States as an example. The two largest normatively endogamous segments would be the Negro and white castes. Within the white caste, endogamous norms break along religious lines: Protestant, Catholic, Jewish. Each of these religious units tend toward actual endogamy in contemporary America, but they can in turn be divided further into units within which endogamy remains an important ideal despite a greater rate of deviation. These units are defined by national origin (and language in some cases): e.g., Irish, Italian, Polish, English, Yankee, etc., Finally, even within such units there are status divisions which are maintained through endogamy (despite social mobility) and which may be termed social classes. Thus if we were to isolate an universe of white Catholic persons of Irish origin who are lower class (by criteria such as occupation, income and education), we are approaching what anthropologists think of as a people with a common culture; it is also what the survey researcher tends to think of as minimal units in a stratified sampling plan.

What is missing of course is a territorial, regional or local context which would provide another set of divisions in the universe of potential mates: hence the lower class Irish Catholics of Boston might be viewed as a small cultural universe for sampling. From a sociometric point of view this cultural universe is made up of numerous clusters of interacting families. Insofar as these clusters are localized, they are community or neighborhood cultural units, local segments of a normatively endogamous population which can be reasonably expected to exhibit and transmit over generations a measure of behavioral distinctiveness.

In many other nations the major normatively endogamous divisions of the population are somewhat easier to find than in the United States. They are defined by primordial ties, i.e., those group-affiliating attributes which an individual acquires at birth and which he comes to identify in membership terms as the result of being socialized by the group. In African societies, language, together with a range of associated cultural behaviors, often defines these major divisions. In the Middle East, religious groupings are some of the major normatively endogamous divisions and in India, castes and linguistic groups. In Latin America the nature of the defining criteria for dividing national populations into segments would vary from one country to another and would cover race, language, and status, although religion would probably play a minor part. The central point is that ethnicity can only be maintained if there are normative barriers to intermarriage, and thus such barriers provide convenient group boundaries for dividing populations into meaningful culture-bearing universes.

However, these universes are too large to be units in the type of intensive child rearing studies that need to be done. If we follow the suggestion mentioned above for the United States and view such a group as made up of local clusters of interacting families, then we arrive at an unit of the community or neighborhood type, equivalent to villages in some places, hamlets in others, streets, blocks or quarters in urban areas and so forth--wherever several contiguous and interacting families of one normatively endogamous group can be found. If such local segments are so small that one alone does not provide sufficient numbers for investigation, then several similar ones can be studied. Thus we propose as the unit from which samples should be drawn the local segment of a normatively endogamous group, hereafter referred to as LSEG.

There are several advantages of the LSEG over ad hoc samples of persons drawn on a non-local basis from a specified population. The following advantages are illustrative: (1) the local basis for the sample makes follow-up easier, so that the sample can become a panel on which data can be accumulated over time in longitudinal and diachronic studies; (2) background data on community environment, social structure, language, and history can be collected for the whole sample as part of an ethnographic, historical, sociological study of the local segment--thus the individuals are studied in the context of their socio-cultural system rather than torn out of it; (3) successive samples of individuals drawn from the LSEG for different studies are known to be drawn from the same population, which helps control sources of variation in sampling bias and allows studies carried out for quite different purposes to achieve a cumulative quality.

Collaborative Research Arrangements

Given a clear definition of an unit for sampling and a recognition of the problems of proof in cross-cultural research we can face more systematically the question of how best to relate to one another around the world so that hypotheses about child rearing can be tested in an ever cumulating manner.

There are many models of such collaboration that we could build on, and these models serve a number of functions: to aid in giving status to behavioral science in developing countries; to get research done which is of practical value to national plans and policies; to aid in reform of university training practices; to train people from the great centers of learning or from developing countries in the most efficient and educationally rich manner and so on. All of these functions need to be met in any total plan for cross-national and cross-cultural work in child development study. The present focus has been more limited in that the over-arching aim has been to assure the possibility of systematic and cumulative tests of theories and hypotheses regarding child rearing wherever these theories arise. It is hoped that a federation of like-minded people dedicated to this kind of research might in some way come into being. This will insure a broad base of ideas as long as it clearly makes explicit place for at least some time for basic research that has no necessary tie to immediate practical payoff.

Applied problems have given rise to some rather striking solutions to collaborative arrangements between universities. The new Cornell Agricultural Development arrangements are a fresh and interesting case. Both foreign and North American students are trained at Cornell and at the local college (South America, Philippines, etc.) in a wide array of subjects, from the chemistry of soil and crops to rural sociology, with anthropological interests. For example, the students work at Latin American universities in what they can learn there best (language, local technical and social problems, aspects of culture, etc.) and at Cornell in what is presently best offered there (theory, laboratories, method, etc.). Students from the Philippines return to their own countries for their field work and they do their social science theses particularly in local problems and with local data. This cuts down their tendency to pick up great interest in problems irrelevant to those they must deal with at home, and also provides an early opportunity for their own country to develop ideas, theory and data that provide for self-definition and confidence.

At the same time, there is a professorial exchange system being worked out so that American professors can learn about other areas and help in setting up the local facilities which will probably be later manned, in part at least, by the students being trained. Their counterparts from the exchange facilities will have an opportunity to retool on laboratory and methodological lore as well as help North American and other students in planning field research which has a realistic and sensible tie to the conditions and practical problems of the countries concerned.

This arrangement is, of course, more or less temporary. It is heavily applied in its research emphasis (though not totally). There is no particular attempt to amass systematic data around particular theoretical problems and to have these data cumulate in any tendentious way. The selection of universities is based on educational need and the pressing quality of practical problems rather than systematically for research design purposes.

Some such arrangement is needed for the next major advance in the scientific study of child development, but a number of the features of the present Cornell plan must be inverted or at least added to, so that two kinds of structures can be constructed under international sponsorship:

A. a federation of a few (seven to twelve) more or less newly developed research facilities or stations. These facilities should be placed in strategically selected areas of the world. Facilities should be placed close to a number of groups which differ on one or more of the dimensions which are known to be determinative of child rearing or of personality. In short, these stations should be placed at the crossroads of the major stratifying classes of LSEG's;

B. a related, but more loosely federated, and probably less reciprocally operated, larger string (about 30) of research facilities should be developed in already existing centers of learning and research.

A. The Federation of Newly Developed Research Stations

The aims of the first, and smaller, group of research stations are related to those of the larger network, but have some unique problems of attainment. Let us look at these aims in the context of the Cornell plan outlined above:

1) These should be planned as stations which will function for at least 10 or 15 years, with hopes of permanency and of integration into local institutions as soon as these local institutions are prepared to protect the scientific activities going on.

2) Though related to education, the research aim must be reasonably protected from practical and local power considerations.

3) There will be a local person in charge of each facility who is well-trained in child development and who is at least bilingual.

At least half of this person's time must be earmarked for his participation in the federation. He and/or his students will have opportunity to study and do research at other member stations.

4) This resident person will always be an active researcher with dedication to cross-national and cross-cultural approaches.

5) Basic and extensively detailed background data on several LSEG's will be developed by the resident member in collaborative systematic planning with the other federation members.

6) There will be regular meetings of federation members.

7) Members will be prepared to aid in the planned arrival and research work of any other member.

8) Research work being done for member B in site A will be paid for, through research assistance and/or teaching, by member B, and member B will ordinarily be on hand when major decisions on data gathering are being made.

9) It is hoped that each member will initiate his own cross-cultural research. At any rate, a crystal clear understanding regarding responsibilities and publication plans and credits will be a major aim of the federation.

10) These seven to twelve stations, by the very fact that they are so selected as to provide for both major variation on LSEG stratifying variables and also for within-group replication, will provide an opportunity for crucial check and replication of tests of the major hypotheses in the area of child rearing and development.

11) Use of the stations should be rather sharply limited, probably to work developed by other stations, but with some carefully considered plans for broader inclusion, particularly from the broader array of existing centers.

B. The Related Group of Research Facilities in Now-Existing Centers

There already exist some growing centers of child development and adolescent research, usually in the greater urban and industrialized centers of the world. These centers are not necessarily as strategically placed as are the stations discussed above, nor are they focused as exclusively on basic child development problems, nor on a cross-national or cross-cultural approach. These centers, selected as strategically as possible, can provide access for federation members, as well as one another, to a larger N of basically studied and very different LSEG's, so that systematic tests can be made of hypotheses which are less powerful and therefore cannot be decided in the range of the more limited set of field stations.

The distinction here between the new stations and the older centers is one of intensity and closeness of federation, of focus on cross-cultural child development studies, and of dedication to cumulation of knowledge by systematic cross-cultural study. Rules relating the two kinds of entity are very important, as in the provision of a quid-pro-quo for the more extensive world sample by use of sharing of teaching, of assistants, etc.

Conclusions and Recommendations for Immediate Action

1. A great deal more information on child rearing and development in a multiplicity of diverse settings is needed before we can do dependable cross-cultural testing of psychological hypotheses linking environmental influences on the child with his subsequent behavior and performance--specifically, a sample of thirty diverse cultural settings (linked to as many as 12 research stations) in which data are continually collected is minimal.

2. It is unrealistic to assume that a sufficient number of U.S. behavioral science specialists can be trained who would be willing or able to spend years in these remote places acquiring expertize in the local languages and cultures and carrying out long-term investigations of child rearing and development; the only answer is to train persons indigenous to these areas in this research and encourage them to return to their localities to carry out

such long-term investigations on a comparable and coordinated basis.

3. Since many of the most crucial areas in which the appropriate cultural settings can be found (Tropical Africa, Southeast Asia, Oceania) have no indigenous child development specialists and virtually no prospects at present for training any, action should be taken by interested specialists at child development centers in the United States to recruit and train at the doctoral level qualified college graduates from these areas. It was the opinion of our group that this training should itself be coordinated to facilitate ultimate comparability of the research and to maximize the benefits of experience built up by persons who have worked in different areas and by institutions like the American University of Beirut, which have been training non-Western specialists in behavioral science research for some years. A conference of interested specialists from Harvard, Cornell, Stanford, Chicago, the American University of Beirut, and perhaps other U.S. centers was regarded as a necessary first step toward such a program.

WORK GROUP ON
DEVELOPMENT OF SOCIAL ATTITUDES

Robert J. Havighurst, Ph.D. (Chairman); Professor Arrigo Angelini; Professor Marcello Cesa-Bianchi; George Coelho, Ph.D.; Professor Rogelio Diaz-Guerrero; Philip Foster, Ph.D.; Ursula Lehr, Ph.D.; Barbara LeVine, Ph.D.; Robert Peck, Ph.D.; Leigh Triandis, Ph.D.

The activity and goal of this group was the development of a research plan for a cross-cultural investigation of the development of competence in several domains of behavior. The areas of behavior that were agreed upon as a focus of study include:

1) the area of task accomplishment, or, as we sometimes think of it--achievement;

2) the area of inter-personal relationships;

3) the area of the handling of aggression--partly as an aspect of inter-personal relatedness, but very important as a basic kind of human impulse which needs to be coped with and channeled or expressed effectively;

4) the area of the handling of the experience of anxiety, or of situations which create strong anxiety; and

5) the area of relationships in authority hierarchies, which is perhaps another subdivision of inter-personal relationships, but of a very special kind.

There are well-known differences cross-nationally in the values attributed to behavior in these different areas and probably in the coping styles which are modal in different societies; for example, the development of skills in the area of task accomplishment. Obviously this is a terribly important issue in every developing culture, and yet one on which we know there are significant cross-national differences in the value that is placed on this, as compared or contrasted with values put on some of the other domains of behavior. Rogelio Diaz-Guerrero points out that in some Latin countries achieving results is valued, but if you have to do it at the expense of good inter-personal relations, very often you don't do it. You only do those things which you can do and maintain really excellent inter-personal relationships with the people with whom you interact significantly. This does not mean that work does not get done, but it gets done in a different way.

Cross-national differences in values and coping styles associated with these five behavioral areas have never been systematically studied, and at this time it seems appropriate to attempt to devise some preliminary empirical operations. These would embody certain specified concepts and yet at the same time be open-ended--would get free response from subjects and enable us to discover the interactions of variables or the introduction of unforeseen variables. There was already a history of research by many members of the group in this direction which could easily be brought together into a common focus. For instance, George Coelho[1] has been working on developing the concept of coping behaviors in a comparative study of adolescents in Puerto Rico and the United States, as they face the problem of making the transition from high school into college. We were also particularly struck by the conceptual utility and the applicability of the whole domain of ideas that has been put forth in recent years by Lois Murphy[2] on coping behavior. We were all interested not in the pathological end of the continuum of behavior alone, but rather in the broad spectrum, including the incompetent or ineffective kinds of behavior, even pathological, but extending all the way up to the most effective.

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[1] Coelho, George and Steinberg, Alma, "A Cross-Cultural Assessment of Coping Behavior: Student-TAT Responses of Competent Adolescents in Maryland and Puerto Rico." Preliminary draft.

[2] Murphy, Lois, "Coping Devices and Defense Mechanisms in Relation to Autonomous Ego Functions." Bull. Menninger Clin. (1960) 24: 144-153.

We deliberately want to work in areas which are centrally relevant to the task of the education process, which the education process can have some hope of affecting for the better. In the first few years of this research we are not going to undertake a study of differential educative processes or experimentation of different methods. We foresee this, in a general sense, as being an extremely desirable step in a stage some years beyond. If we can get stable, meaningful and important measures of competence in these areas we can then go on to use these in studies of the effects of different systems or different strategies of education on the children's development of competence in one or another area. This is also relevant in the development of mental health.

Instruments

We are constructing a small number of instruments tailored to the conceptual schema as we have worked it out to date: a story completion instrument, a sentence completion instrument, and a need inventory, all of which still need some additional work.* Each of them presents problems in one of these five domains of behavior and provides opportunity for children to respond freely. In addition to these instruments, several others were discussed as possible techniques to use:

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*Of special interest is the methodological decision which we have made to start with some free response techniques, score them (perhaps with a content analysis) and then utilize that material to make up more objective measurements. There is considerable value for cross-national research in making up items that are drawn from a number of different countries, even if you get no variance on them within one particular country. For example, in Triandis' research in India, some of the most interesting data and valuable insights into the mothers' child training practices came from questions about three child training practices which they never used; their reasons why they never used them were very informative. One would not get this by simply doing a content analysis of the mothers' responses in one country and putting it into an interview, because that material would never have appeared as an alternative. Variables which have no variance in one group or one cultural group, may nevertheless be very useful variables in cross-national research.

1) Rosenzweig type test (Lehr);

2) Draw-a-family test (Cesa-Bianchi) plus the Wartagg Drawing Completion;

3) Existing standardized instruments

    a) Cattell Junior Personality Quiz
    b) Value Hierarchy
    c) Family relations questionnaire
    d) Cooperative Youth Study Scales (selected subscale).

It is hoped that this particular selection of tests will yield information that can be considered meaningful within the research matrix presented here.

Analysis

The schema for analysis of the responses, as far as we have a preconceived coding system, will be an attempt to take a given unit of behavior, for example the completion to a problem story (which is very much analogous to the completion of a T.A.T. story) and categorize it or scale it on several dimensions:

1) Is the child's reaction to this problem situation primarily an instrumental reaction or an expressive one? It is felt that there are rather important cross-national differences in this. This is not necessarily to be considered an evaluative dimension, only a descriptive one.

2) Another dimension is Rogelio Diaz-Guerrero's special contribution--the concept of activity versus passivity, or active coping versus passive coping.** This is not in

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**This is a concept that might be very useful to the Peace Corps. It is the kind of thing that leads to a good bit of misunderstanding, because (con.)

the evaluative sense that North Americans or perhaps North Europeans think of it, i.e., that the active is good and the passive is bad, but rather these are two different major styles of coping, either of which may be equally relevant and workable in a particular cultural setting but on which nations and societies do vary.

3) The third dimension is quite explicitly an evaluative dimension--this is the dimension of coping versus defensive behavior as Lois Murphy and her co-workers have defined it, as people at the Institute of Human Development in California worked out in research fashion just recently, and as others of us, Texas and elsewhere, have been working on, without calling it exactly that but with some of the very same factors of behavior in it, under the aegis of the broad term "mental health." We are going to try to get a quite simple and relatively clear operational measure of this; in the problem story for example, it will be clear that this is a problem that is recognizable as

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passive copers and active copers have many friction points. The United States government in the Peace Corps is sending people from an actively coping society to persuade people to actively cope with social problems. In many instances the Peace Corps representatives are being sent into societies that value passive coping. Not only will they be unable to get work efficiently done if they do not understand this distinction, but they may generate considerable hostility. From the point of view of an active coper, passive copers appear to be not coping with problems at all since the external environment has not been modified. From the point of view of a passive coper, the active coper appears as an aggressive and interfering agent who is attempting to get them to deal with a problem that they do not perceive as a problem. It is often difficult to discuss this dimension in terms that are not negatively valued by the Americans; however, Dr. Diaz-Guerrero's distinction allows clarification without this negative evaluation.

> such in each of the participating countries. Does the child resolve it or does he not? Now this is an evaluation.

We anticipate that there may be some disagreement on specific behavioral responses to the common problem in different places as to whether a particular kind of behavior is an effective one or how effective it is in one place, whereas judges of another place may evaluate differently. What we want to do is to capitalize on this very phenomenon. There are ways of analyzing this so it is possible to identify the structure of the value system of judges, whether they be different individuals just representing their own idiosyncracies or representatives of different cultures. We feel that here, too, we have the opportunity to do a trial job of measurement in a psychometric sense. At the same time we will have data which will permit us to examine not only what the children see and do differently in different cultural settings that we do not anticipate, but also what the judges from the different cultural settings do when they look at samples of behavior: how do they interpret it, how do they evaluate it and what could this tell us about non-universal dimensions or patterns, as well, of course, as what cross-cultural agreements there may be on certain kinds of behavioral responses.

Sample

We plan to restrict only two variables: we will conduct this kind of project first of all in urban centers, for several practical reasons as well as theoretical, and we will use two age groups--one sample of ten-year-olds and one sample of fourteen-year-olds. We will include both boys and girls in equal numbers and we are going to sample the social spectrum of the societies in what we hope will equate, or very close to equate, the social status levels across nations. For that purpose we decided to take the upper middle class, which would be the managerial, professional families, and by contrast, but still in a fairly stable kind of population, we will take the upper lower classes, that is, the skilled working class where there is a greater likelihood of stability of residence, statistically speaking, and therefore the maintaining of the research population over a period of several years without tremendous loss.

Schedule and Future Plans

The project, as we have sketched it, is in two stages. The first stage is this informal collaboration, without special financial support, which will extend over the next twelve months or so, according to the following timetable:

March-June, 1964

a) circulate and agree on occupational status ranking;

b) circulate and agree on final forms of psychological instruments to be used;

c) prepare request for research grant, Office of Education.

September-October, 1964

a) select classes to be tested, approximating this design:

	Male		Female	
	UM	UL	UM	UL
N=	75	75	75	75

UM=Upper Middle class
UL=Upper Lower class

b) administer pilot instruments.

November-December, 1964

a) experimental analysis of data.

Approx. December 7-15: working conference

a) devise coding procedures for free response data;

b) design new psychometric measures from pilot research;

c) make final arrangements for the full scale research to last 3-5 years.

We are going to request funds for a working conference, probably next December, just prior to the Inter-American Society Psychology Meetings, to bring together the data we have collected and compare it.

At that time we will evaluate what has happened to the ideas we had originally and what new ones need to be identified and put to work. At the same time we will prepare a specific proposal for the second stage of this research project in personality and attitude development, probably for a three or five year span, of a quasi-longitudinal nature.

In the second stage of this research we anticipate collecting several different kinds of independent behavioral data. One of them would be sociometric in nature, where we collected the observations over a period of time, the judgments of children themselves of their age-mates back and forth. We know from a lot of studies of various kinds this approach has a good degree of validity in describing the behavior of individuals and groups. A second one would be interview data, using a critical incident technique, e.g., asking teachers to nominate children who they see as outstandingly effective or ineffective in one or another domain and then questioning them about specific incidents showing it. This kind of technique could also be used with parents. Other kinds of independent data will be one of the things we will be worrying about in the next year and thereafter.

Collaborators

Members of our group who will be engaged in this project include Dr. Angelini in Brazil, Dr. Cesa-Bianchi in Italy, Dr. Diaz-Guerrero in Mexico, Dr. Havighurst in Chicago, Dr. Ursula Lehr in Germany, and Dr. Peck in Texas.[+] We have collaborators doing other work in England whom we strongly suspect would be interested in collaborating. We see this proposed project and our group here as a working group, an inclusive rather than an exclusive one. We would be prepared and happy to have research people, who represent other societies and other cultures, join us during the period of the research.

[+] The other group members--Dr. Coelho, Dr. Foster, Dr. Barbara LeVine and Dr. Leigh Triandis--hope to continue to be in touch with the project, but at the present time are unable to participate in data collection.

Reciprocal Collaboration on Current Studies

In addition to the construction of plans for a common, future research plan, the arrangements were made for the expansion of three current studies to include all of the five countries. A rating instrument designed to elicit children's conceptions of "The Good Teacher" has been used in Italy, following its initial development in England. This instrument is now being used to collect data in Brazil, Mexico, Germany, and two stations in the United States.

An essay-type instrument, "When I am 40" and "When I am 60," has been developed by Dr. Ursula Lehr for use in Germany. Now, as a result of the Cross-National Conference, these data are being gathered in the four other countries as well.

The third study is an expansion of the "Cross-Cultural Study of Values" which has been going on in Brazil, Mexico and Texas. The "Respect" and "Love" questionnaires, the "Value Hierarchy" and the "Men and Women" instruments are now being administered in Germany and Italy. (These data are also being gathered in England, by the collaborators who may later join the projected Cross-National Study of Children's Competence).

WORK GROUP ON COGNITIVE DEVELOPMENT

Robert D. Hess, Ph.D. (Chairman); Basil Bernstein, Ph.D.; Professor Ernest Boesch; Bettye Caldwell, Ph.D.; Mary Ellen Goodman, Ph.D.; Lawrence Kohlberg, Ph.D.; Frederick Lighthall, Ph.D.; Hiroshi Wagatsuma, Ph.D.

In contrast to the Child Rearing and Social Attitudes groups, the group on Cognitive Development worked largely on theoretical considerations. These dealt broadly with family interaction and communication as related to development of the child's cognitive functioning and value concepts, including a concern with family interaction both as determining development and as being itself determined by the larger societal contexts.

The first focus of the group centered on linguistic forms of communication, along the lines of Basil Bernstein's analysis.[1] Bernstein's distinction between restricted and elaborated codes appeared to offer a promising bridge between family structure on the one hand and cognitive functioning on the other. Bernstein[2] suggests that family role systems can be described as being either person-oriented (decisions made in terms of the individual attributes of persons) or status-oriented (decision-making structure in terms of rigid statuses, based on age, sex and age relations). Elaborated linguistic codes, which develop in person-oriented as opposed to status-oriented family structures, lead to more effective modes of cognitive functioning.

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[1] Bernstein, Basil, "Elaborated and Restricted Codes: Their Origins and Some Consequences." Paper presented at a joint meeting of the Cross-National Conference on Childhood and Adolescence and the American Educational Research Association, Chicago, February 21, 1964. (See Appendix).

[2] Bernstein, Basil, "Family Role Systems, Communication and Socialization." Unpublished paper presented at the Cross-National Conference on Childhood and Adolescence, February 20-28, 1964.

Robert Hess and Bettye Caldwell felt the use of restricted codes might be especially relevant to their work in understanding the cognitive difficulties of lower class Negro children, both in terms of the relationship of family linguistic codes to the mother's teaching style and the influence of the mother's teaching style on the child's cognitive functioning. Hess' particular interest is in the educability of pre-school children, specifically, the extent of influence of the child's immediate social environment (the mother) upon the cognitive style of the child which may inhibit or enhance his performance later in the school situation. From performance tasks involving the mother and the child, it is becoming apparent that there are specific "ego skills" which influence the way in which the child learns. It is believed that the home pre-school cognitive environment is a necessary but not necessarily sufficient factor for determining later school performance.

Caldwell is concerned with socialization as a reciprocal process, i.e., the mother's influence upon the child and the child's influence upon the mother, and with the effects and means of transmission of the implicit learning theory held by the mother, as discussed by Loevinger.[3]

Frederick Lighthall, who is studying the capacity for delay and deliberation in various kinds of cognitive functions, saw this capacity as being related to individual differences in verbal planning and to hesitation and monitoring phenomena in speech. His work has been focused on both non-verbal and verbal response variables, looking at them both developmentally (ages 6.5 to 10) and in terms of social class and reward conditions (tangible vs. intangible).

Those who were especially interested in studying value development--Mary Ellen Goodman, Hiroshi Wagatsuma, and Lawrence Kohlberg--felt that linguistic analysis had important relevance to what they were doing. Goodman has been studying the transmission of values within the family. Rather than concern for families from which social deviates come, the concern is for families in which social values are communicated successfully with an interest in social value differences between class and racial groups. Kohlberg, defining moral cognitive development as an ability to take the role of the other, sees acquisition of this behavior as a result of the synthesis of socialization and physical development processes.

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[3] Loevinger, Jane, "Patterns of Parenthood as Theories of Learning." J. Abn. Soc. Psych. (1959) 59: 148-150.

Wagatsuma has been studying biographical and projective materials of boys and their parents from lower class families in Tokyo. The purpose is to assess personality and relationship factors in particular family configurations as influential to the formation of behavioral problems. The results so far suggest a possible relation between juvenile delinquency and sex role reversal of parents. Wagatsuma feels that the linguistic code analysis will differentiate between the families of delinquents and of non-delinquents, as value communication processes and "family themes" in general are different in these two groups of families. He is more strongly interested, however, in using linguistic code analysis methods in his next planned research on families in minority groups in Japan and families based on cross-cultural marriage, because in these families the "language" factor seems to play a more apparent, if not important, role in the socialization processes of children.

Ernest Boesch, who is concerned especially with family communication systems relevant to cultural innovation, felt that a code analysis would be relevant to the question of the receptiveness of the family to innovative communications. He has been developing a model of innovation and culture change which stresses change in the incentive value of a new behavior pattern in the time course of its adoption. Characteristically, the valence of a new behavior item lowers during some period in the course of its adoption and then rises again if the process of adoption is continued. This period of dip is a strategic period for intervention or support by groups involved in innovation. (Thus, for instance, particular incentive changes with regard to education may become negative as children are first introduced to new behaviors and an educational setting, which behaviors are also new to the parents and which cannot be shared; this then involves a sort of process of reverse socialization of the parents). These concepts of incentive change and innovation provided the group with some basis for formulating and developing a shared interest in the planned stimulation of families, or intervention with regard to families, in the direction of adoption of values and cognitive techniques which would enhance educability.

The one definite area of consensus in our group was our interest in language, both as this affects cognitive development and as it reflects cognitive development. Individually we each were already working out various techniques of analyzing language, and getting different kinds of samples. We would like to avoid this process of development of multiple systems and concentrate on one, i.e., Dr. Bernstein's system, but as yet we really do not know whether the kind of language samples that each of us is distinctly interested in can at the present time be adequately handled in this way. The analysis of linguistic codes in these various research contexts would involve the extention of Bernstein's concepts and methods to a variety of languages and cultures, and to the speech of young children, which has not been previously analyzed in these terms. We engaged in a considerable discussion of various problems and methods involved in such an extention of Bernstein's concepts to these various types of data. For example, Wagatsuma will have to see how the Bernstein code analysis technique is applied to conversational Japanese language, which, compared with English, for instance, is characterized by a relative lack of grammatical explicitness.

The conclusion of the group was that we are interested in having Dr. Bernstein either train us or some other person who might be able to integrate the different samples, and then see what kind of continuing contacts we would need to make, whether we would need to change our samples, etc. With all this in mind, each of us would attempt to apply this method and these concepts to our own current research projects. Then depending upon the experience that we attain and the success that seems to be evident, we might plan additional projects that would bring members of the group to a common research design. At the present time, however, most of us felt that there were great possibilities which we could explore within our own projects without asking for any large-scale collaborative study.

For this purpose we will need some interchange, some contact, and some training. We propose to apply for funds that will enable us to carry out this kind of plan within our own projects, allowing for the training and travel expenses which would be involved. We hope therefore to form a loose kind of continuing group in which developments and adaptations in our concepts and methods would be circularized among the members. In addition, various parts of our raw data, such as coding, would be photocopied and sent to anyone interested in considering new relevant variables. Rather than having our particular group form a closed group, it was felt that it might form something a little more general, such that others interested in cross-national studies of family communication patterns would be invited to participate in this kind of exchange or clearinghouse group.

APPENDICES

ELABORATED AND RESTRICTED CODES: THEIR ORIGINS AND SOME CONSEQUENCES*

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Introduction

This paper represents an attempt to discuss some aspects of the inter-relationships between social structure, forms of speech and the subsequent regulation of behaviour. The practical context of the inquiry is the differential response to educational opportunity made by children from different social classes.[1,2] It has become abundantly clear that the determinants of this response are complex and that the response encapsulates the effects of socialization. The problem requires specification of the sociological processes which control the way the developing child relates himself to his environment. It requires an understanding of how certain areas of experience are differentiated, made specific and stabilized, so that, that which is relevant to the functioning of the social structure becomes relevant for the child. What seems to be needed is the development of a theory of social learning which would indicate what in the environment is available for learning, the conditions of learning, the constraints on subsequent learning and the major reinforcing process.

The behavioural implications of the physical and social environment are transmitted in some way to the child. What is the major channel for such transmissions? What are the principles which regulate such transmissions? What are the psychological consequences and how are these stabilized in the developing child? What factors are responsible for variations in the principles which regulate the transmissions? The socio-linguistic approach used here is a limited attempt to provide some kind of answer to these questions.

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*Paper presented at a joint session of the Cross-National Conference on Childhood and Adolescence and the American Educational Research Association, Chicago, February 21, 1964.

[1] Reissman, Frank, The Culturally Deprived Child. New York: Harper and Row, 1963.

[2] Passow, A.H. (Ed.), Education in Depressed Areas. New York: Columbia University, 1963.

The general framework of the argument will be given first. This will be followed by a detailed analysis of two general linguistic codes. Towards the end of the paper, some variants of the codes will be very crudely associated with social class. In order to make a distinction between language and speech, a simple view of language has been adopted. Only two levels of language will be distinguished. The first level consists of the formal elements which may be used for the purposes of organization. These are relational elements and syntactic devices. There are rules regulating the use of such elements. This level is referred to as structure. Language may be looked at from this point of view, in terms of the range of structural alternatives or options which may be used for the purposes of organization. The second level consists of words which have objective reference or can be given objective reference. This level is called vocabulary. From the point of view of vocabulary, language may be considered as the totality of meanings evoked by the words which carry objective reference. Putting the two levels together, it could be said that language represents the world of the possible. On the one hand, it contains a finite set of options and the rules of their regulation at the structural level and a set of options at the level of vocabulary. Language then represents the totality of options and the attendant rules for doing things with words. It symbolizes what can be done.

Speech, on the other hand, is constrained by the circumstances of the moment, by the dictate of a local social relation and so symbolizes not what can be done, but what is done with different degrees of frequency. Speech indicates which options at the structural and vocabulary level are taken up. Between language, in the sense defined, and speech is social structure. The particular form a social relationship takes, act selectively on what is said. In terms of this approach the form the social relationship takes regulates the options which speakers select at both the structural and vocabulary levels. Inasmuch as the social relationship does this, then it may establish for the speakers specific principles of choice--coding principles! These specific principles of choice, the canons which regulate selections, entail from the point of view of the speakers and listeners, planning procedures which guide the speakers in the preparation of their speech and which guide the listeners in the reception of speech.

Changes in the form of the social relationship, it will be argued, act selectively upon principles of selection. Changes in the form of the social relationship can affect the planning procedures an individual uses in the preparation of his speech and it can affect the orientation of the listener. Different forms of social relationships may generate quite different speech systems or linguistic codes by affecting the planning procedures. These different speech systems or codes may create for their speakers different orders of significance. The experience of the speakers may then be transformed by what is made significant or relevant by the different speech systems. This is a sociological argument because the speech system is taken as a consequence of the form of the social relationship, or, put more generally, is a quality of the social structure. The social structure becomes the independent variable and the speech system is of the order of a dependent variable. There are important psychological implications. The speech system or linguistic code, itself a function of the social structure, marks out selectively for the individual what is relevant in the environment. The experience of the individual is transformed by the learning which is generated by his own apparently voluntary acts of speech.

Summarizing the argument, the following is obtained. Different social structures may generate different speech systems or linguistic codes. The latter entail for the individual specific principles of choice which regulate the selections he makes from the totality of options represented by a given language. The principles of choice originally elicit, progressively strengthen and finally stabilize the planning procedures an individual uses in the preparation of his speech and guide his orientation to the speech of others. What he actually says, from a developmental perspective, transforms him in the act of saying.

As the child learns his speech, or in the terms used here, learns specific codes which regulate his verbal acts, he learns the requirements of his social structure. The social structure becomes the substratum of his experience essentially through the effects of the linguistic process. The identity of the social structure, it is thought, is transmitted to the child essentially through the implications of the linguistic code which the social structure, itself, generates. From this point of view, every time the child speaks or listens, the social structure of which he is part is reinforced and his social identity is constrained. The social structure becomes, for the developing child, his psychological reality by the shaping of his acts of speech. Underlying the general pattern of the child's speech are, it is held, critical sets of choices, preferences for some alternatives rather than for others, which develop and are stabilized through time and which eventually come to play an important role in the regulation of intellectual, social and affective orientation. Children who have access to different speech systems or linguistic codes, by virtue of their position in the class structure, may adopt quite different intellectual and social procedures which may be only tenuously related to their purely psychological abilities.[3,4]

Elaborated and Restricted Linguistic Codes

A start may be made by putting the following questions, although the answers are bound to be both limited and inadequate:

1) What kinds of social relations generate what kinds of speech systems?

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[3] Bernstein, Basil B., "Social Structure, Language and Learning." Educational Research (1961) 3: 163-176.

[4] Bernstein, Basil, "Social Class and Linguistic Developments." In A. H. Halsey et al. (Eds.) Education, Economy and Society, New York: Free Press, 1961. Pp. 288-314.

2) What kinds of principles or planning procedures control the speech systems?

3) What kinds of relationships in the environment do these planning procedures both give access to and stabilize?

Two general coding systems will be distinguished.** These systems will be defined in terms of the kinds of options speakers take up in order to organize what they have to say. These speech systems or linguistic codes are not defined in terms of vocabulary. If it is difficult to predict the syntactic

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**The term code refers to the principles which regulate the verbal planning function. Three stages of this function are distinguished:

1. Orientation: the receiver scans incoming messages for a pattern of dominant signals;
2. Association: associations to the pattern of dominance control selections from the store of words and extra-verbal signals;
3. Organization: the selected words are fitted within grammatical frames and integrated with extra-verbal signals.

It follows that restricted and elaborated codes will establish different kinds of control which crystallize in the nature of verbal planning. The latter is a resultant of the conditions which establish the patterns of orientation, association and organization. The originating determinants of this trio would be the form of the social relationship or more generally the quality of the social structure. This would allow the following postulate: the form of the social relationship acts selectively on the type of code which then becomes a symbolic expression of the relationship and proceeds to regulate the nature of the interaction. Simply, the consequences of the form of the social relationship are transmitted and sustained by the code on a psychological level, through the verbal planning process. Strategic learning would be elicited, sustained and generalized by the code which would mark out what is available to be learned and would constrain the conditions of successful learning.

options or alternatives a speaker uses to organize his meanings over a representative range of speech, this system of speech will be called an elaborated code. In the case of an elaborated code, the speaker will select from a wide range of syntactic alternatives and so it will not be easy to make an accurate assessment of the organizing elements he uses at any one time. However, with a restricted code, the range of alternatives, syntactic alternatives, is considerably reduced and so it is much more likely that prediction is possible. In the case of a restricted code, the vocabulary will be drawn from a narrow range but because the vocabulary is drawn from a narrow range, this in itself is no indication that the code is a restricted one.

If a speaker is oriented towards using an elaborated code, then the code through its planning procedures will facilitate the speaker in his attempt to put into words his purposes, his discrete intent, his unique experience in a verbally explicit form. If a speaker is moving towards a restricted code, then this code, through its planning procedures, will not facilitate the verbal expansion of an individual's discrete intent. In the case of an elaborated code, the speech system requires a higher level of verbal planning for the preparation of speech than in the case of a restricted code. It will be argued that the general behaviour elicited from speakers by these two codes is directed towards different dimensions of significance. The events in the environment which take on significance when the codes are used are different, whether the events be social, intellectual or emotional. These two codes, elaborated and restricted, it will be argued, are generated by particular forms of social relationships. They do not necessarily develop as a result of the speaker's innate intelligence. The level at which a speaker operates a particular code may well be a function of his native ability, but the orientation is entirely a matter of the sociological constraints acting upon the speaker.

I want first to examine some variants of a restricted code which exemplify the social characteristics of this code. These variants represent ideal cases and so they will be referred to as examples of the pure form of a restricted code. These variants all have one major common attribute:

the verbal component of the message, given the social context, is highly predictable. Because the verbal component of the message is highly predictable, it necessarily follows that this must also be the case for the syntactic alternatives. Prediction refers to an ability of an observer who knows the code. In the case of the variants to be discussed, both observers and speakers share the ability to make the same level of prediction. Thus these variants can be subsumed under the general title of restricted code, as a special case of lexicon prediction.

Restricted Code (lexicon prediction)

A distinction will be made between the verbal component of the message and the extra-verbal components. The verbal channel in this paper refers only to the transmission of words. The extra-verbal channels include messages transmitted through the expressive associates of the words (intonation, etc.) and messages transmitted through gesture, physical set and facial modifications. In the first variant of the ideal case, the messages transmitted through all channels (verbal and extra-verbal) approach maximal redundancy from the perspective of both transmitter and receiver. This variant will occur where the organization and selection of all signals is bound by rigid and extensive prescriptions. The social relations will be of an ascribed status form, located usually, but not always, in religious, legal and military social structures. The status relations are such that the area of discretion available to the encumbents is severely reduced, with the consequence that few options exist through which the encumbents may signal their discrete intent. The individual is transformed into a cultural agent. In these social relations, if discrete intent is signalled, that is, if the messages depart from maximal redundancy, then such messages are likely to be evaluated by the receiver(s) as violations, as profane.

The second variant of the ideal case of a restricted code is one where there is considerably less redundancy in the messages carried through the extra-verbal channels, while the verbal channel carries messages approaching maximal redundancy. Consider the case of a mother telling her child stories which both know by heart--"And little Red Riding Hood went into the woods," ritualistic pause, "and what do you think happened?" ritualistic question. This is another social relationship which constrains the options available to the encumbents of the statuses for the transmission of difference, or for the transmission of discrete intent. If the mother wishes to transmit her discrete experience or her uniqueness, she is unable to do this by varying her verbal selections. She can do it only by varying the messages transmitted through the extra-verbal channels: through changes in muscular tension if she is holding the child, changes in facial set, gesture or intonation. The verbal component of the messages ensures that ascribed status aspects of the social relation are made salient or the saliency of ascribed status aspects of the relation generates the characteristics of the order of communication. Notice that in this variant the code defines the channels through which new information will be transmitted. New information will be made available through the extra-verbal channels. Inter-personal aspects of this social relation will be regulated by the encoding and decoding of messages passing through the extra-verbal channels. The code symbolizes and reinforces the form of the social relation and controls the channel through which new learning is made available. The mutual intents of mother and child are transmitted through extra-verbal channels, and these channels are likely to become objects of special perceptual activity.

The third variant refers to an order of communication where the verbal component approaches maximal redundancy, but where the extra-verbal channels permit messages of a relatively much lower order of prediction. If this is the case, then it is much more likely that the extra-verbal channels will become objects of special perceptual activity, as both transmitter and receiver will signal their discrete experience through the agency of such channels. There are many examples of this variant. I shall give only one. Consider a dance hall downtown. A boy asks a girl to dance. They have never met before. Although the precise nature of their initial communications will vary, it is suggested that they will take this form from the point of view of the boy: "Do you come here often?"; "Bit crowded n'it?"; "S'nice floor"; "Band's alright/dead/with it." Clearly there are many examples of such routines. It is suggested that the exchange of verbal messages approaching maximal redundancy occur in those social relationships where the participants have low predictability about each other's discrete intent. The routine establishes predictability at a high level of consensus. The consensus is obtained by making the status aspect of the social relation salient. In fact, the form of the social relation at this point is one of ascribed status, as in the other two cases previously discussed. What is said is impersonal in the sense that the verbal component comes prepacked. Inter-personal aspects of the relation will be again transmitted through the extra-verbal channels, and these will again become objects of special perceptual activity. How the social relation develops will depend upon the decoding of extra-verbal messages as these will carry new information which refers to the discrete intent of the participants. Further, this variant of a restricted code affords the possibility of delayed commitment to the relation. Whether the relation will shift from one of status to an inter-personal form regulated by speech will depend upon the decoding of extra-verbal messages. This variant differs from the preceding two in terms of a greater use of potential options available in the extra-verbal channels. It is suggested that the preliminaries to oriental bargaining relationships also exemplify this variant of a restricted code (lexicon prediction).

In all the three variants of a restricted code (lexicon prediction) the following interrelated characteristics may be found. Clearly the social contents and function of these variants greatly differ. Attention has been drawn only to very general characteristics of the code.

1) The status aspect of the social relation is salient;

2) New information is made available through extra-verbal channels and these channels will become objects of special perceptual activity;

3) Discrete intent can only be transmitted through variations in the extra-verbal signals; and

4) The code reinforces the form of the social relation by restricting the verbal signalling of differences.

Restricted Code (high structural prediction)

In this form, which is empirically the most general, only the syntactic alternatives taken up to organize meaning across a representative range of speech carry high predictability. In the case of a restricted code (lexicon prediction), it was argued that the controls on lexicon selection and syntactic organizations were functions of social assumptions common to the speakers. These assumptions, translated behaviourally, refer to prescriptions inhering in the relative statuses the speakers are filling. It was noted that the speech refracted through these prescriptions did not permit the signalling of discrete intent. In the case of a restricted code (structural prediction) the options available for verbal and extra-verbal messages are very much greater than in the case of a restricted code (lexicon prediction). The constraint exists essentially at the syntactic level. The range of syntactic alternatives used in this code is reduced and therefore the alternatives are relatively predictable. The lexicon, however, is likely to be drawn from a narrow range; but the fact that the lexicon is drawn from a narrow range is no criterion for deciding whether the code is restricted.

What is responsible for the simplification of the structure, the narrowing of the lexicon range, and the consequent constraint on the verbal elaboration of unique experience? It is suggested that the code is a function of a specific form of social relation. In the case of a restricted code (structural prediction), the speech is played out against a backcloth of assumptions common to the speakers, against a set of closely shared interests and identifications, against a system of shared expectations; in short, it presupposes a local cultural identity which reduces the need for the speakers to elaborate their intent verbally and to make it explicit. In one sentence the extent to which the intent of the other person may be taken for granted, the more likely that the structure of the speech will be simplified and the vocabulary drawn from a narrow range.[5,6,7]

Concretely, a restricted code (structural prediction) will arise in closed communities like a prison, combat units of the armed service, criminal subcultures, and also in the peer group of children and adolescents and between married couples of long standing. In fact, the code will develop wherever the form of the social relation is based upon some extensive set of closely shared identifications, self-consciously held by the members. It is important to note that the use of specialist terms does not of itself indicate a restricted code (structural prediction).***

I would like to examine in some detail the characteristics of this code. Consider a group of boys at a street corner, or a group of close friends in a bar, or a courting couple. I suggest that if one were observing their relationships one would be struck by the following:

1) The observer would be eavesdropping on inclusive relationships and so he would be struck by the measure of his own exclusion. He might have difficulty at first in following the speech as it would tend to be fast, fluent, relatively unpaused, and so the articulatory clues would be reduced.

2) On the other hand, if he could write down the sequences, he might be surprised to find that they would be relatively

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[5] Vygotsky, L.S., "Thought and Speech." Psychiatry (1939) 2:29.

[6] Sapir, E., "Communication," Encyclopedia of the Social Sciences. New York: The Macmillan Co., 1931.

[7] Malinowaki, B., "The Problem of Meaning in Primitive Languages." In C.K. Ogden and I.A. Richards (Eds.) The Meaning of Meaning. London: Routledge & Kegan Paul, 1923.

***For the sake of simplicity the term restricted code will be used for this speech system unless the context requires greater precision.

impersonal. If intent does not have to be verbalized and made explicit, if much can be assumed and taken for granted, there is no need to use a level of verbal planning which requires careful selection and fine discriminations. Consequently, he could expect that there would be a reduction in the number of qualifiers, a simple verbal stem limited to the active voice. There might be an increase in some personal pronouns like "you" and "they," and a reduction in others like the self-reference pronoun "I." He might find, over and above idiosyncratic use, a greater frequency of terminal sequences like "isn't it," "wouldn't they," "you know," "you see," etc. In other words, he might expect a reduction in the use of those elements which facilitate the verbal transmission of discrete experience and the speech would emphasize the communality of the speakers. This does not mean that there would be no differences between the speakers, only that the differences would be transmitted in a particular way. The verbal meanings would be condensed but the amount of speech would still be considerable. The change would be in quality not quantity.

3) He might notice the vitality of the speech and this vitality would serve an important function. The burden of changes in meaning would be carried through the extra-verbal component of the communication. The "how" of the communication would be important rather than the "what." The discrete intent of the speakers, the "I" of the speakers, would be transmitted not through varying their verbal selections, but through varying the expressive features of the communication, through changes in gesture, physical set, intonation, and facial modification.

4) He might also notice that the speech sequences, from his point of view, would tend to be dislocated--disjunctive. There might well be logical gaps in the flow of meaning. The speakers would not be worried because they could take much for granted. The connecting devices in the speech might

not clarify the logical organization of meaning. In fact, the observer might find that the meanings were strung together rather like beads on a string rather than being logically ordered.

5) Finally, the content of the speech is likely, but not necessarily, to be concrete, narrative and descriptive, rather than analytical or abstract. If the speech moved in the direction of the abstract, it would be likely that the propositions would not be fully developed, relying on sequences like "you see," "you know," "wouldn't it" to bridge points of uncertainty.

Putting all this together, an observer might be struck by the fact that the speech in these social relationships was fast, fluent, with reduced articulatory clues, the meanings might be discontinuous, dislocated, condensed and local, but the quantity of speech might not be affected, that there would be a low level of vocabulary and syntactic selection and that the "how" rather than the "what" of the communication would be important. The unique meaning of the person would tend to be implicit.

In fact, the sequence might have the same general form as this:

"It's all according like well those youths
and that if they get with

gangs and that they most

they most

have a bit of a lark around and

say it goes wrong

and that and they probably knock some off I
think they do it just to be a

bit big you know

getting publicity here and there."

--Transcript of a tape-recorded discussion
(Lower working class; verbal I.Q. average)

The point I want to make is that a restricted code is available to all members of society as the social conditions which generate it are universal. But it may be that a considerable section of our society has access only to this code by virtue of the implications of their class background. I am suggesting that there is relatively high probability of finding children limited to this code among sections of the lower working class population. On this argument, the general form of their speech is not substandard English but is related to and shares a similar social origin with the restricted code I have just outlined. It is a special case--a case where children can use one and only one speech system. What this code makes relevant to them, the learning generated by apparently spontaneous acts of speech, is not appropriate for their formal educational experience. But only from this point of view is it inappropriate.

A restricted code (structural prediction) shares the general social characteristics of the variants of a restricted code (lexicon prediction). It is perhaps somewhat less misleading to say that it is on the same dimension but at the opposite end. It limits the verbal signalling of discrete intent; the extra-verbal signals become important bearers of changes in meaning and so tend to become the object of special perceptual activity. The status aspect of the social relation is salient with a consequent reduction in role discretion. The code is a facility for the transmission of global, concrete, descriptive, narrative statements in which discrete intent is unlikely to be raised to the level of verbal elaboration and so made explicit.

Elaborated Codes (low structural prediction)

I shall consider finally the nature of an elaborated code, its regulatory function and its social origin. Restricted codes can be considered status-oriented speech systems. The codes reinforce the form of the social relation by limiting the verbal signalling of personal difference. The forms of an elaborated code are quantitatively and qualitatively different from the codes so far discussed. An elaborated code was defined in terms of the difficulty of predicting the syntactic alternatives taken up to organize meaning across a representative range of speech. This difficulty arises because an extensive range of syntactic alternatives is available within this code and therefore the probability of which alternatives will at any one time be taken up is low. This code, through its planning procedures, facilitates the speaker to elaborate verbally and make explicit his discrete intent. An elaborated code, or at least an orientation towards this code, will develop to the extent that the discrete intent of the other person may _not_ be taken for granted. Inasmuch as the other person's intent may not be taken for granted, then the speaker is forced to expand and elaborate his meanings with the consequence that he chooses more carefully among syntactic and vocabulary items.

Now to the extent a speaker does this his sequence will carry _verbally_ the elaboration of his experience. The potential discrepancy between speakers in expectations, in nuances of interests, generates in them a tension to select from their linguistic resources a verbal arrangement which closely specifies a given referent. Meanings which are discrete and local to the speaker are cut so that they are intelligible to the listener. The condition of the listener, unlike the case of a restricted code, will be taken into account in the preparation of the speech. In terms of what is transmitted _verbally_, rather than what is transmitted _extra-verbally_, an elaborated code encourages the speaker to focus upon the other person as an experience different from his own. An elaborated code is _person_ rather than status oriented.

In the case of a restricted code, what is transmitted _verbally_ refers to the other person in terms of his _status_ or local group membership. What is _said_ reflects the form of the social relation and _its_ basis of shared assumptions. Speakers when using a restricted code are dependent upon these shared assumptions. The mutually held range of identifications defines the area of common intent and so the range of the code. The dependency under-pinning the social relation generating an elaborated code is not of this order. With an elaborated code, the listener is dependent upon the _verbal elaboration of meaning_. In restricted codes, to varying degrees, the extra-verbal channels become objects of special perceptual activity; in elaborated codes it is the verbal channel.

It is important to consider differences in the role relations which these codes presuppose. The form of the social relation which generates an elaborated code is such that a range of discretion must inhere in the role if it is to be produced at all. Further, the speaker's social history must have included practice and training for the role. These role relations receive less support from shared expectations. The orientation of the speaker is based upon the expectation of psychological difference--his own and others. Individuated speech released through an elaborated code presupposes a history of a particular role relation if it is to be both prepared and delivered appropriately. The range of discretion which must necessarily inhere in the role involves the speaker in a measure of social isolation. He may be differentiated from his social group as a figure is differentiated from its ground. The role relations which presuppose a restricted code are quite different. The range of discretion of the role is confined to the area of common intent, and, therefore, the role receives explicit support from the status components of the relationship. Looked at from another point of view the controls on the role would be mediated through a restricted self-editing process as far as the verbal messages were concerned. Although it is going too far to argue that the role relations of a restricted code orient its speakers to seeking affirmation, confirmation or similarity, it is likely that role strain results from persistent attempts to signal discrete intent in a verbally elaborated form. This source of role strain in restricted code relationships is precisely the role relationship appropriate for an elaborated code.

As these codes are translations of different forms of social relations or even qualities of different social structures, different orientations, different ranges of discretion, different forms of dependency, different sources of strain inhere in the respective roles. Thus speakers limited to a restricted code may be unable to manage the role requirements which are necessary for the production of an elaborated code. Conversely, it is possible that an individual limited to an elaborated code cannot switch codes because of an inability to switch roles.

An elaborated code generated originally by the form of the social relation becomes a facility for transmitting individuated verbal responses. As far as any one speaker is concerned, he is not aware of a speech system or code, but the planning procedures which he is using both in the preparation of his speech and in the receiving of speech is creating one. These planning procedures promote a relatively higher level of structural organization and vocabulary selection than in the case of a restricted code. What is then made available for learning by an elaborated code is of a different order from what is made available in the case of a restricted code. The learning generated by these speech systems is quite different. By learning, reference is made to what is significant, what is relevant socially, intellectually and emotionally. From a developmental perspective, an elaborated code user comes to perceive language as a set of theoretical possibilities available for tne transmission of unique experience. The concept of self, unlike the concept of self of a speaker limited to a restricted code, will be verbally differentiated, so that it becomes in its own right the object of special perceptual activity. In the case of a speaker limited to a restricted code, the concept of self will tend to be refracted through the implications of the status arrangements. Here there is no problem of self because the problem is irrelevant.

The preparation and delivery of relatively explicit meaning is the major purpose of an elaborated code. This affects the manner of delivery. The speech of a restricted code, it was argued, would be delivered in a fast, fluent, relatively unpaused style with reduced articulatory clues. The speech controlled by an elaborated code will be punctuated by relatively frequent pauses and longer hesitations. A specific monitoring, or self-editing system, initially generates the code. The time dimension underlying the planning process producing an elaborated code tends to be longer than the time dimension underlying the planning process producing a restricted code.[8,9] The delay between

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[8] Bernstein, B., "Linguistic Codes, Hesitation Phenomena and Intelligence." Language and Speech (1962) 5: 31-46.

[9] Goldman-Eisler, F., "Hesitation and Information in Speech." Fourth London Symposium on Information Theory, pp. 162-174.

impulse and verbal signal is mediated through an extensive self-editing process in the case of an elaborated code. If a speaker is limited to a restricted code, then a specific planning or monitoring system develops and becomes progressively strengthened. These differences in the time dimension inhering in the planning processes of the two codes will have a number of psychological consequences.

As a child learns an elaborated code, he learns to scan a particular syntax, to receive and transmit a particular pattern of meaning, to develop a particular self-editing process and very early learns to orient towards the verbal channel. He learns to manage the role requirements necessary for the effective production of the code. He becomes aware of a certain order of relationships (intellectual, social and emotional) in his environment and his experience is transformed by these relations. As the code, through its planning procedures, becomes established, the developing child voluntarily generates these relations through his acts of speech. He comes to perceive language as a set of theoretical possibilities for the presentation of his discrete experience to others. An elaborated code through its regulation induces developmentally in its speakers an expectation of separateness and difference from others. It points to the possibilities inherent in a complex conceptual hierarchy for the organization of experience.[+]

It is possible to distinguish two modes of an elaborated code. One mode facilitates relations between persons and the second facilitates rela-

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[+] This may seem confusing as an elaborated code has been considered, relative to a restricted code, as a person-oriented speech system. These new distinctions are within the general form of an elaborated code. The two modes possess the general features of an elaborated code. They both carry low structural prediction, they serve as facilities for the verbal elaboration of discrete intent, they orient their users to the expectation of difference, they point to logically similar conceptual orders but the referents of the relationships are different, and the sole relationships, which the modes presuppose, are also different.

tions between objects. These two modes of an elaborated code would in principle differentiate different ranges of experiences and would presuppose different role relations. Although there is little time to develop this distinction, it might have some relevance to the present problems of C.P. Snow's two cultures.

A child limited to a restricted code will tend to develop essentially through the regulation inherent in the code. For such a child, speech does not become the object of special perceptual activity, neither does a theoretical attitude develop towards the structural possibilities of sentence organization. The speech is epitomized by a low level and limiting syntactic organization, and there is little motivation or orientation towards increasing vocabulary. This code becomes a facility for transmitting and receiving concrete, global, descriptive, narrative statements involving a relatively low level of conceptualization. The planning processes which generate the speech involve a relatively short time dimension and thus a reduced self-editing function. Extra-verbal channels tend to become the agencies through which discrete intent is signalled and so these extra-verbal channels early become objects of special perceptual activity. It is a status-oriented code and elicits and progressively strengthens a relatively undifferentiated adherence to the normative arrangements of a local social structure. The verbal channel promotes the transmission of social rather than individual symbols. As the child learns a restricted code, he learns to control a particular role relation and code switching may be hampered by the role requirements of a restricted code. Finally, an individual limited to a restricted code will tend to mediate an elaborated code through the regulation of his own. Clearly one code is not better than another; each possesses its own aesthetic, its own possibilities. Society, however, may place different values on the orders of experience elicited, maintained and progressively strengthened through the different coding systems.

The orientation towards these codes, elaborated and restricted, may be independent of the psychology of the child, independent of his native ability although the level at which a code is used will undoubtedly reflect purely psychological and physiological attributes. The orientation towards these codes may be governed entirely by the form of the social relation, or more generally by the quality of the social structure. The intellectual and social procedures by which individuals relate themselves to their environment may be very much a question of their speech models within the family and the codes these speech models use.

Finally, I should like to draw attention to the relations between social class and the two coding systems. The subcultural implications of social class give rise to discrete socialization procedures.[10,11] The different normative systems create different family role systems operating with different modes of social control. It is considered that the normative systems associated with the middle class and associated strata are likely to give rise to the modes of an elaborated code whilst that associated with some sections of the working class is likely to create individuals limited to a restricted code. Clearly social class is an extremely crude index for the codes and more specific conditions for their emergence have been given in this paper. Variations in behaviour found within groups who fall within a particular class (defined in terms of occupation and education), within a mobile society, are often very great. It is possible to locate the two codes more precisely by considering the orientation of the family role system, the mode of social control and the resultant verbal feedback. Variations in the orientation of the family role system can be linked to the external social network of the family and to occupational roles. It is not possible to do more than mention the possibilities of these more sensitive indices.

Very crudely, then, children socialized within middle class and associated strata can be expected to possess both an elaborated and a restricted code

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[10] Bronfenbrenner, U., "Socialization and Social Class Through Time and Space." In E.E. Maccoby et al. (Eds.) Readings in Social Psychology, London: Methuen & Co., Ltd., 1958. Pp. 400-424.

[11] Newson, J. and Newson, E. Infant Care in an Urban Community. London: Allen & Unwin, 1963.

whilst children socialized within some sections of the working class strata, particularly the lower working class, can be expected to be limited to a restricted code. As a child progresses through a school it becomes critical for him to possess, or at least to be oriented towards, an elaborated code if he is to succeed.

Some research specific to this thesis based upon small samples of subjects and speech does indicate that middle and working class subjects aged fifteen years, male, matched for average I.Q., differ in their coding orientation in the predicted direction.[12] This research further indicated that differences in the time dimension of the planning processes inhering in the respective codes were also in the predicted direction. It is important to repeat that these results are based upon small samples. Further research has shown that middle and working class subjects, male, at two age levels, matched for average verbal and average non-verbal I.Q., operated with the predicted codes in a sample of representative written work.[13] This study also showed a relation between levels of abstraction and the use of the respective codes.

There is also firm evidence showing a relative deterioration in verbal I.Q. between the ages of eight and eleven years and between eleven and fifteen years for working class children when compared with middle class children between the same ages.[14] Other research shows clearly that the verbal I.Q. scores of working class subjects, particularly lower working class, are likely to be severely depressed in relation to their scores at the higher ranges of a non-verbal test.[15,16,17,18,19] This deterioration in verbal I.Q., discrepancy between verbal and non-verbal I.Q. tests and the failure to profit from formal education on the part of working class children, particularly those of lower working class origins, is thought to be closely related to the control on types of learning induced by a restricted code. The relative backwardness of some working class children may well be a form of culturally induced backwardness transmitted to the child through the implications of the linguistic process. The code the child brings to the school symbolizes his social identity. It relates him to his kin and to his local social relations. The code orients the child progressively to a pattern of relationships which constitute for the child his psychological reality and this reality is reinforced every time he speaks. This is not the place to discuss how appropriate code-switching may be learned.

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[12] Bernstein, B., "Social Class, Linguistic Codes and Grammatical Elements." Language and Speech (1962) 5: 221-240.

[13] Lawton, D., "Social Class Differences in Language Development." Language and Speech (1963) 6: 120-143.

[14] Committee on Higher Education, Higher Education: Appendix One, parts 2 and 3. London: H.M.S.O., 1963.

Conclusion

An attempt has been made to show how two general coding systems and their variants are elic-

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[15] Bernstein, B., "Some Sociological Determinants of Perception." British J. Sociol. (1958) IX: 159-174.

[16] Bernstein, B., "Language and Social Class." British J. Sociol. (1960) XI: 271-276.

[17] Venables, E., "The Reserve of Ability in Part-Time Technical College Courses." University Quarterly (1962) 17, no. 1.

[18] Report of the Central Advisory Council for Education, Fifteen to Eighteen, Vol. 1. London: H.M.S.O., 1958. P. 376.

[19] Ravenette, T., "Intelligence, Personality and Social Class: An Investigation into the Patterns of Intelligence and Personality of Working-Class Secondary School Children." University of London Library, 1963.

ited by the structure of social relations. The dimensions of relevance created by the different coding systems have been explored. Although the main burden of the paper has been to examine broad social class affiliations of the codes and to indicate briefly their socializing and formal educational consequences, it is tentatively thought that the theory might well have a more general application. Elaborated and restricted codes and their variants should be found in any social structure where their originating conditions exist. The definitions should, in principle, be capable of application to a range of languages although in any one case elaboration and restriction will be relative.

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3. Vygotsky, L.S. *Thought and Language.* New York: John Wiley and Sons, Inc., 1962.

INFORMATION AND MOTIVATION*

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Education consists in the systematic transmission of messages (of various natures) with the aim of motivating the individual for specific forms of behavior. In this sense, *information and motivation* are closely connected aspects of one total process. Motivation is useless without the necessary means for action, i.e., a stock of information; training, on the other hand, is impossible without the intention to learn and is fruitless without the corresponding motivation to make use of the acquired information. There arises, therefore, a question which is *central* to all education: *how has information to be presented to create motivation*?

We all know the practical importance of the problem: poor effects of formal teaching when it fails to "arouse the interest," to "catch the attention." We sometimes fail to see, however, the enormous waste, material as well as human, which inadequate understanding of the process of information may produce.

Let us begin by considering the problem on the basis of a practical experiment. It has not been designed in any systematic way, and it lacks many properties for definite conclusions; allowances have to be made for a number of uncontrolled variables. However, it shows the results of two different educational approaches in the same population, and therefore has a rare demonstrative and suggestive value. I quote from James Ingram's *Economic Change in Thailand Since 1850*[1]:

> As early as 1902 the Thai government tried to revive and strengthen the silk

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[1] California: Stanford University Press, 1955.

industry (in the North East) by technical assistance. Japanese experts were brought in to survey the industry and to give instruction to home weavers as well as to teach in a school which was established in Korat. Experiment and demonstration stations were set up, and Japanese experts brought in modern looms on which they gave free weaving lessons to the villagers. Meanwhile, several hundred girls were graduated from the silk school, and new equipment was imported and distributed by the government. After several years, however, it was noticed that silk exports had not increased, and raw-silk weavers had completely rejected the new methods, that the graduates of the school had promptly dropped all they had been taught when they returned to their villages, and that the new equipment supplied by the government was stored away in attics and barns. According to Graham: 'Efforts made by the authorities to combat this astonishing lethargy only had the effect of decreasing the cultivation of silk wherever they were applied, and the government, finding itself therefore equally unable either to lead or to drive its people to better things, abandoned the whole undertaking and left the silk-growers to look after themselves. With the weavers the Japanese experts had never had even the shadow of an influence, and thus the silk situation in 1922 was exactly as in 1901, before the King set about improving it.'

Since the war the silk industry has been greatly stimulated through the initiative of Mr. James Thompson and the Thai Silk Company. Thompson has successfully put Thai silk on the world market, and at the same time he has revived interest in traditional patterns and types of cloth, and has induced weavers all over the North and North East to use fast dyes and to produce for sale. He has made few changes in the traditional methods and tools of the weavers, however. The major changes in technique introduced by Thompson have been the use of fast dyes and flying shuttles. The latter device enables workers to increase their output considerably.

Compared with the usual ways of proceeding in modern technical assistance, there was nothing wrong with the Japanese project. They carried out an initial survey, they organized instruction in schools and demonstration centres, there was provision of adequate material and a sufficient number of successful trainees. On the whole, it proceeded along the lines of rational educational planning: first to define the aims which should be reached (in this case: increased output of home weaving), then to determine the technical means suitable for reaching these aims (here: improvement of material and working techniques), and, finally, to translate the necessary information into a systematic sequence of messages: we may assume, too, that these messages have been transmitted by the usual media of education, i.e., formal teaching, demonstration and exercise. Why then the failure?

Let us compare the two projects, the Japanese one and the Thompson one. They are both based on the same initial message, which would read something like: "By producing more, you can earn more and, in consequence, also consume more." The motivational content of both messages is thus identical; however, the rest is not, which accounts for their different success (reservation being made for other influences due to social change which occurred between the two experiments).

As Ingram said, the Japanese tried to improve production prior to demand, while Thompson did the opposite. Thus, in Thompson's case, the aim of action was for the weaver directly tangible, more concrete than in the Japanese case. In other words, the psychological distance for the proposed action was different in both cases. The amount of psychological distance to overcome is important as to the motivating properties of a message.

Psychological distance is not determined by the tangibility of the aim alone, but as much by the difficulties of reaching it, i.e., the instrumental problems to overcome. While the Japanese introduced new looms with all the problems of training, maintenance and repairing connected with them, Thompson chose to maintain the traditional tools. In this respect, too, the psychological distance was shorter.

However, instrumental difficulties do not necessarily hinder motivation. On the contrary, often a new instrument is able to increase quite considerably the incentives for action. The difficulties of learning to drive a car certainly would motivate only a few people to stick to the traditional bicycle. Why then did the new loom in our example not motivate the villagers to adopt the new weaving techniques?

New instruments are, seen psychologically, very complex phenomena. They can be considered to be "information" in that they directly convey certain messages and in that they require a certain amount of "decoding" in order to be understood. At the same time, however, they are more than simply instrumental, as are most messages, as they possess "consumatory qualities," providing enjoyment or social status; insofar as they allow the reaching of certain aims in a more efficient way, they have intermediate, instrumental qualities. We can assume that the "new gadget" has high incentive value when its consumatory and instrumental qualities are high and the task of "decoding," i.e., of learning to handle it, is not too complex in relation to the value given to the final result.

Moreover, however, the value of a new instrument as of any new message depends upon the social group. And in all these respects, the new looms and weaving techniques could not have more than a momentary attraction. They required much effort, with only little immediate reward. Furthermore, the introduction of the new techniques bypassed the normal social channels: it selected young girls as trainees, weaning them from the traditional social support. A student of Thai culture will soon be aware of the fact that it must have been difficult and delicate for the Thai girls trained in the weaving schools of Korat to go back to their villages in the role of technical innovators. There arose problems of status relationship, disturbing the age old balance of succeeding generations. The new looms gave the girls a social prestige which was contrary to the habitual patterns of social life.

This raises the important problem of the social dynamics of new information. Traditional contents of information can be defined as messages which are known to a majority of the members of a group and which are positively valued by them. New information, on the contrary, is generally available or understandable only to smaller sections of a group or to some individuals alone; furthermore, their value is more likely to be questioned. New information tends therefore to fractionate a group--it creates new positions, which will have to be socially assimilated.

Let us, for a moment, try to introduce here some considerations about the varying motivational value of a message. Let us assume that we have to do with a relatively homogeneous group and with a message or information which appeals to certain needs which this group does not sufficiently satisfy. Every group leaves open such "unsaturated valences" which are important spots for the beginning of innovation processes. In this situation a message may have a strong appeal to an individual. As soon, however, as that individual begins to act in order to reach the aim proposed by the message, he has to introduce new factual elements in the set up of his life and of his group. He more and more approaches the position of an outsider, and thus more and more sees himself confronted with personal insecurity, either because of new and unaccustomed situations, or because of increasing social distance. Therefore, the initially steep "approach gradient" grows weaker, while the avoidance gradient, i.e., the tendency to return to the initial and secure situation, grows stronger. The individual will therefore have to go through a situation of ambivalence and conflict: he might even abandon the action if he still can.

Such reactions are not always necessary. They can be postponed, because the individual remains unaware of the increasing complication of his existential situation. For instance, this was what happened to a whole group in the example given by Spicer on the negative effects in an Australian tribe of replacing the flint axes by steel axes. Or, the insecurity will not arise at all, because the new situation proves to be entirely profitable to the individual. There is no space here to discuss all the possible variations of the dynamics of information, but it is important at any rate to be aware of them. We see that, in the case of the Thai silk weavers, insecurity had to occur in the relationship between younger and older generations and that, in order to preserve the social stability, the innovation process simply reversed. There are other cases, however, where the reversal proves to be impossible.

The example discussed up to now allows some conclusions. Information as such has not in itself positive qualities. To make it beneficial, a) it has to be based on existing needs and motivations (here: increased possibilities of consumption), or, in other words, it has to consider "unsaturated valences"; b) the psychological distance, i.e., the difficulty of an action, has to correspond to the motivational situation; and c) content and form of the message, as well as the proposed outcome of the action, have to fit into existing social frames of reference.

All this sounds trivial. It recalls the old request that methods and contents of teaching be adapted to the mind of the student. We only forget, sometimes, that the mind of the student consists of the culture in which he lives and that the aims of teaching are often as important as methods and content.

We can educate somebody to be like his parents or unlike his parents. In our modern world, the second is more and more the case, and, at any rate, education in developing countries means to become unlike one's father most of the time. In such cases, however, any educational project, be it formal or informal, in or out of school, starts a process of cultural innovation which at the same time means cultural disintegration. And in such cases, education which does not understand the socio-psychological processes which it starts, is not worth its name. This means then that all transmission of information (at any rate in education, but maybe elsewhere too) should be considered as the beginning of an innovation process. Therefore, we have to know more than simply the extent to which a message corresponds to the level of comprehension and to the interests of the pupil; it implies much more, i.e., a precise knowledge of the relationship of the message to the receiver.

This raises a number of problems relative to all stages of information processes. This process always starts with an intention to communicate, translated into some kind of message. This translation may be skillful or not, but even where it is, it never really fulfills the intention. There will be the obvious contents of information omitted, based upon some intuitive appraisal of what is obvious to the receiver. There will be side effects overlooked, such as the timing or the situation in which the message is given. The "coding of a message" will be the more difficult, the greater the social or individual distance between informer and receiver of a message.

We may omit here the problems of transmission of a message, i.e., the ones related to the "channels of information," and just insist on the problems on the side of the receiver. Just as in the coding of an intended message into the given one, so the "decoding" by the receiver will never be completed. In any information process some elements get lost, while others, originally not present, may be added--the individual assumes to understand or tries to interpret. He (the receiver) will do so on the basis of his social relationship with the informing partner, but also on the basis of his whole socio-cultural background.

The action so induced is in itself again a message, received and interpreted by the person who initiated the communication. The educator knows that much action of students is carried out less in order to reach the intrinsic aim, than to satisfy the person giving the order, i.e., is intended more to be an answer than an action.

The more complex the relationship between the agent of information and the receiver, the more complex the socio-cultural field in which this process plays, the higher the likelihood that there will occur distortions of various kinds. Some of the most important distortions are frequently not intended and are sometimes unsuspected side effects of information. The social breakdown in an Australian tribe by the introduction of steel axes is an example of such side effects.

Allow me to illustrate what I mean by these side effects with an example which, in this case, is fictitious, but which can easily be replaced by authentic cases. Let us assume that a WHO expert goes to an Asian country. Organizing a campaign against certain infectious diseases, he explains to the villagers the importance of cleanliness, according to our bacteriological knowledge. He will soon discover traditional beliefs, explaining those diseases by the action of malevolent spirits. Our expert, therefore, taking advantage of modern audio-visual techniques which his educational colleague will have provided tries to replace these superstitious theories by more rational concepts, and he might soon see some undeniable success. His action, however, has sociological consequences of which he might not be aware. I do not think here of the decrease in mortality with the ensuing occupational problems--they cannot be part of the tasks of a health expert. I think rather of the fact that the belief in malevolent spirits is part of a complex metaphysical and social system. It is connected with, among other things, rites of protection, and these rites have the double function of reducing anxiety and of strengthening group cohesion. Now, having successfully fought the infectious disease, these rites may become superfluous and fall into disuse. This, however, would also make disappear their positive and constructive social function, and since processes of cultural change always raise the level of anxiety in a group, such a loss might well be rather unfortunate. Furthermore, rites,and metaphysical beliefs are most frequently connected with social hierarchies: the performance of rites may objectify and stabilize status distinctions; on the other hand, the metaphysical system may allay social aggressions and anxieties. Here, again, the theory of microbes does not provide a suitable substitute. Thus, while improving health, our expert might have created social problems of a complex and far-reaching kind. Such results obviously cannot be measured, and it is frequently difficult to trace them back precisely to their cause.

We know unfortunately only too little about these side effects since most of the time they are not systematically controlled. But a systematic analysis of educational results in developing countries might prove that they are sometimes extremely far-reaching. The revoluntionary potential of young Western-trained elites might, for instance, be one of these side effects. We might, therefore, be very practically interested in getting them somewhat more under control, or at least in being able to foresee them.

In this sense, the problems of information in educational assistance have to be more than a theory of perception or a model of information theory. They have to be a science of innovation processes. This means that they will have to start on the basis of an intimate knowledge of social and cultural frames of reference, and of the saturated and unsaturated valences in a culture. They must be able to evaluate the "stimulus value" of a message in a given situation, and they will have to evaluate the disturbing power of new information within a given social group. They will have to judge which are the individuals of a group which are either open to new information or opposed to it, which are the ones most suitable as intermediate agents for spreading information. There will have to be more knowledge about the socio-psychological processes going on during acculturation in both individuals and in groups. For all of this we do not yet, as far as I can judge, possess a very solid basis of knowledge in our sciences. I feel persuaded, however, that educational assistance will have to deal with these questions on a much more systematic basis if we want to do more than improvising work in other cultures. Perhaps even in ours.

SOME RECENT TRENDS IN THE STUDY OF CHILD REARING AND THEIR IMPLICATIONS FOR EDUCATIONAL PRACTICE*

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Introduction and Educational Import

I wish to discuss those trends in the study of child rearing with which I have been living, and to limit these trends to some which have been going on in the cross-national, cross-cultural or cross-societal areas. Further, I would like to keep my discussion of educational implications to a minimum. In fact, my main point can be stated at the outset and held to be a theme of the remainder of my remarks: it is high time that we recognize that American higher education is an international education and turn more of our research in the direction that this fact suggests. In hundreds of colleges and universities American professors are having hundreds of thousands of encounters with students from every country and tribe under the sun. There is all the goodwill necessary to make such encounters reasonably successful, but we lack the background knowledge and the background facts about the patterns of intellect, habit and drive with which we are dealing in these foreign students.

We still know much less, even, about the rules and the rights and duties under which these students grew up. We do not know how far or in what ways to push them toward excellence. As a result many of us fear that we are developing different standards and lower standards in training for foreign students. We are afraid that the dignity of our universities is being unduly hazarded by the hundreds of high and higher degrees that we give to students from abroad in too easy a manner. If this is at all true, then it may arise from a mixture of goodwill and ignorance. Cross-national and cross-cultural research may help us toward dropping the ignorance and learning where the potential excellences may be, as well as telling us something about how to bring them out.

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The first graduate student from Nigeria with whom I worked closely left me dazzled and troubled. His intellectual energy was amazing, his faith in knowledge unstoppable. But the total pattern of his life in America would be a saga of energy thrown in many directions. I greatly doubt that we helped form and discipline him to realize even a small part of his potential. If we learn more about his origins and his expectations we may do better next time.

So much for implications: let the rest of them come as they may, and let us turn to a look at those trends that I have been living close to and which may have some general interest.

On the Practices of Child Rearing Themselves

Let me first talk briefly about some recent developments in the task of describing what exists as child training practices. The Cornell-Harvard-Yale study of socialization in six cultures has finally published its first volume, edited by Beatrice Whiting,[1] and this book presents reports of child training which are written and organized not only to provide a portrait of what happens as a child grows in each of the six communities studied, but to do this in such a manner that these practices can be systematically compared. The first volume provides the richer ethnographic background within which the more quantitative data can be interpreted. This is my first trend: toward an interest in comparing cultural groups systematically, both in terms of their positions on variables and in terms of the relations among variables.

Leigh Triandis of the University of Illinois and I have been analyzing the long interviews which were held with a sample of mothers in each of the six communities studied: communities in East Africa, New England, Mexico, the Philippines, India and Okinawa. We have factor analyzed the scaled answers of the mothers to our standard questions, along with some ratings based on parts of the interview. The seven main factors are technically interesting, and it is fortunate that scores based on these factors heavily reflect variance _within_ cultures on reported child training practices as well as variance, of course, between cultures. The factors are similar to many which have turned up on American data in the past, but some are new, and all have their own flavor.

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[1] Six Cultures: Studies of Child Rearing. New York: Wiley, 1963.

I can give you some feel for these data and for the placement of the various communities on our factor dimensions by reporting that the New England community stands out in having the highest scores of all groups on the factors which reflect the degree to which the mother tends to have sole responsibility for the care of her _baby_ and for her _child_. This community is also outstanding for the _lowest_ scores of all on the punishment it metes out for peer aggression. The Mexican community stands out in its _high_ scores on punishment for peer aggression; the Philippines group stands out for its high score on the factor which appears to reflect the emotional stability of the mother and for the _low_ score on the degree to which the mother has sole responsibility for the care of her _children_. The Okinawa group is peculiarly high on scores reflecting the _warmth_ of the mother, and joins the Philippines group in high scores on the mother stability factor. The mothers in our North India village stand out for their _low_ scores on the factor which reflects the pressures for training children not to aggress against parents; they also rank lowest in their warmth. The mothers of the Gusii tribe of Kenya, East Africa have the highest scores on the factor reflecting punishment for parent-directed aggression and the lowest scores on the factor reflecting their emotional stability. These African mothers are second only to the American mothers in the degree to which they are solely responsible for child care.

I have reported here only the ways in which these groups of mothers fall particularly high or particularly low on our factors as compared to what I will call the "pan-cultural mean" or average for all six societies. But these pan-cultural means, and the deviations from them, are of more than passing interest: we are now attempting to understand why the variance of the distributions of mothers within a society tends to increase as the group is either high or low, relative to the pan-cultural mean. It is as if it is hard to keep agreement on norms if they are too high or too low compared to our averages. This may force us to talk about some pan-cultural human nature tendencies in child training practices, but we are still resisting such a temptation.

At any rate, it is intrinsically interesting to be able to pursue with these systematic data the placement of communities around the world. But a future trend is knocking on the door even before our second volume of the report of the Six Culture Study goes to press. There is an increasingly strong complaint from a number of research centers that we have too often leaned on the shaky reports of mothers for our description of child training variables, and that we must find ways of obtaining fuller observational records of what goes on as children are dealt with by parents. I agree in general with this future trend, and I hope our Cross-National Conference on Childhood and Adolescence can find a way to provide us with more systematic direct information of this kind. We have much mother-child interaction recorded in the files of the Six Culture Study, but by no means enough for the best analysis.

On the Antecedent Conditions for Child Training Practices

Leigh Triandis and I were intrigued by the way in which the six communities of the Six Culture Study ranged themselves on our arthogonal factor. We therefore turned in our analysis to a research trend which was started some time ago by several people, including David Aberle, Daniel Miller and Guy Swanson at Michigan and John Whiting and George Murdock: a trend toward research for the specific economic and social conditions in a culture which can explain the existence of a particular pattern or emphasis of the child training practices.

In our own case we are busy testing a series of hypotheses, some of which are obviously post hoc inductions from the sample of findings mentioned. Do mothers who spend a great deal of time with their children tend to become more or less unstable emotionally? Do mothers who live close to their relatives strive more to control peer aggression, so that important family ties are not threatened? Do mothers who supervise their children in responsible work for the family tend to punish these children more for parent-directed aggression, possibly due to the need to keep a supervisory role in relation to these young workers? Do mothers who live in extended families tend to be less warm and supportive of their own children in order to keep away the jealousies that might arise from favoritism under crowded living conditions?

But John Whiting and his Harvard colleagues have delved further by looking into such ecological factors as climate and food supply, with an eye to the effects of these things on sleeping practices, social structure and, of course, child rearing practices. His analysis of diet, for example, lays bare a relationship between protein deficiency and prolonged weaning; the prolonged weaning, in turn, tends to be tied to a post partum sex taboo; this in turn is related to polygamy and to patrilocal residence. The prolonged weaning, coupled with related sleeping practices (which are in turn tied to climate), help explain why severe male initiation rites arise; they assure that the young adolescent male will break his long, warm tie to his mother and take on his full sex role. This masterful use of cross-cultural evidence pushed the causes of some child training practices back to what we may lightly call "quasi-ultimates." Such research is bound to stimulate further work and further theoretical controversy on a topic which also bears on the mental and physical health and capacity of children in many of the most struggling parts of the world.

On the Consequences of Differing Child Rearing Practices

a. The Trend toward Physiology

There are also some new trends in studying the consequences of different child rearing practices. The first trend is toward looking at physiological or biochemical consequences (or at least, concomitants). Perhaps David Krech started this trend when he argued several years ago that not only psychology in general, but also social psychology, must go to the physiological substructure of behavior for explanations as soon as possible.

Krech then followed suit, and has since been doing very exciting basic work with animals, attempting to display clearly how different growing environments have measureable effects on brain tissue and in the amounts of some vital biochemicals available to the brain. Stanley Schachter has followed with a lively theory of emotion-in-general, and in the relation of arousal level, cognition-of-the-situation, and emotion. Kurt Bock and others are measuring the effects of group experiences on the blood biochemistry of the actors. With some new and very feasible gadgets for this and other physiological measurements available, we will hear more of this trend. Sweden, particularly at the University of Stockholm, seems to be a very exciting research center in this area.

My favorite example is, of course, close to home, in the work which Arthur Wolf and I have been doing in Taiwan, New York City and at Cornell in relating child training practices to the differing amounts of biologically effective adrenaline and nor-adrenaline in the bodies of children who are treated differently in training. We collected, with much field effort, 24-hour samples of the total urinary output of 64 children in a Taiwanese village. After initial analysis, this material was shipped, frozen, by jet to New York City, where the rest of the rather delicate analysis was completed. At Cornell we are still analyzing the relationships in these data, but it is fairly clear that the ratio of nor-adrenaline to adrenaline in a child's urine is predictive of the total frequency of observed aggressive actions by the child. We are still not sure as to which facet of aggression is most closely related to the ratio, but it is a bit exciting to find some of Funkenstein's theory of emotion upheld in this new kind of data.

But we are most interested in the relation of the amount of these substances to reported child training practices. Funkenstein and several others have suggested that nor-adrenaline is related to "anger-out," whereas adrenaline is related to "anger-in," which may be tentatively interpreted as "inhibitory anxiety." Our findings appear to bear this out: when children have a reported history of physical punishment, they have a significantly higher adrenaline count than do children who have been dealt with less explosively. In fact, since in our Taiwan village parents tend to be consistent (in their reports at least), almost any index of punitiveness is correlated to some degree with the level of adrenaline. Nor-adrenaline in the urine is related only to very early baby-care practices. It is high in the case where the parents usually let the baby cry rather than tending to him right away, which may well be the condition for reinforcing a high pitched rage response by the time they did get around to caring for him.

It should interest educational researchers that we have not yet found a simple study which focuses upon whether or not the amounts of substances like adrenaline and nor-adrenaline are stable characteristics of individuals. We have reanalyzed the data from the only study which provided 24-hour total urine analyses for two days instead of only one. These test-retest reliabilities are fairly high, even for mentally ill subjects who are one day at home and the next day in an institution, but the measures were taken from one day to the next rather than over weeks, months or years. We are being led to put educational research criteria to work on this area as soon as possible.

b. The Trend toward Cognition

So much for the "trend toward physiology." There is no doubt of the existence of another trend, as the preponderant interest of our conference attests: there is a great wave of interest in the cognitive consequences of child training and other educational practices.

I have lived close to one of the most exciting developments in this current movement: the analysis of "success styles" of children by my colleague John Roberts and his collaborator, Brian Sutton-Smith. Their work began with Roberts' cross-cultural study of games, in which he discovered that games of skill were frequent in cultures where children were strongly trained or in conflict concerning achievement; that games of strategy (like chess) were related to conflict in obedience which results from child training pressures. These kinds of games are differentially preferred by individuals as well and act as cognitive models of preferred success styles. Adolescents and even pre-adolescents can reliably "spot" their peers who are trying to "win" through luck, through skill or power, or through backstage strategy. These success styles, therefore, model in a safe way the kinds of rules about which a child (or the children of a cultural group) are in conflict, and they serve to help a child learn these rules in an easier atmosphere than the real world of the society where they apply. One of the interesting research problems still ahead involves an explanation of why some people become addicted to games whereas others learn from them enough skill to win out in society, reduce their conflict and give up the game. Roberts reports that there are poker or bridge players at Cornell who spend as much as 40 hours at what he considers their addiction.

This research is a broad scale approach to the problems and issues that arise in studies of cognitive development which lean on the notion of cognitive surrogates or models. I have been struck recently at the close tie between Roberts' general approach and that of Vigotsky, particularly as Vigotsky's tradition has been carried out by Professor Zaparozhets of Moscow University, who is currently an exchange professor at Cornell., He reports many clever experiments which show that provision of a clear physical model for a perceptual discrimination or a problem of thinking can greatly speed up the necessary perceptual development. But Roberts chooses to look to very large cultural domains for his models to study, and has included folk stories and novels in his perspective. I have only touched on the range of his integrated interests.

c. A Trend Back toward Direct Observation of Action

Let us turn to a theme or trend mentioned before when we saw that a number of people wish to obtain more direct observational evidence on child training practices. There is also a trend toward direct observation as the preferred way of measuring some of the effects of child rearing practices. It is my personal belief that we are at the point of seeing a whole new realm of phenomena by way of observation of interpersonal behavior of developing children. I will illustrate what I mean in a moment.

This trend has much to do with the work of Barber and Wright at the University of Kansas, who have done some mammoth empirical studies of the ecology of behavior and some of this work is of the cross-national sort. They have developed methods for delineating the total population of behavior settings in a town or city and then in various ways to count the frequencies of various kinds of behaviors within these settings. An English town which they studied, for example, has fewer total behavior settings than an American town of half the English town's population. The average adolescent in the American town holds about 4 times the number of responsible positions that the average English town child does. This moves us to a new kind of ecological question: why does the American town have so few people per setting and the English town relatively so many more? To what extent is this the result of our different character from the English, ot does it help determine our differences of character? Barber has the hunch that the English child, who also tends more to be segregated to contact with his peers only, develops much greater competence but in fewer areas, and retains a much more distant relationship with older people and with people in authority.

In the Six Culture Study we have made use of the notions of behavior setting, but we have attempted to more directly sample the setting used by a particular child and then to record as verbatim as possible the theoretically relevant interactions which occur in these settings. We can therefore study the effects of settings as determiners of the actions of children, but we can also study some of the finer texture of the particular child's behavior and relate it to the child training practices which are also under study. Most of the analysis of these behavior protocals collected for the Six Culture Study is going on at Harvard under John and Beatrice Whiting's direction or at Cornell by Richard Longabaugh. But I can illustrate something of what I see in the possibilities of these data by our preliminary analysis of some of Arthur Wolf's Formosa data.

First I will give a note on the ethnographic background. The Taiwanese village that Wolf studied is the most extreme in all the groups we have closely studied in the rules regarding peer aggression. After an early permissive period in this regard, the child comes under some extremely strict rules.

Not only must he not start a fight, he must not retaliate, either. In fact, it matters not how a fight developed, the bad thing is to have been in it. In fact, it is very wise to disappear from the setting of action even if you are an innocent bystander. If a child is hit by another he can go directly to that child's mother, report him, and have the interesting experience of watching the hitter's mother punish him publicly in front of the hurt child. She does this, says Wolf, to publicly display her attitude that she does not wish this kind of thing to go on because it might disrupt the harmony among the many related families of the village.

We have recorded relatively large sample of the interpersonal behavior of children who live under these strict rules. Further, we have done this for a sample of older children and one of younger children; for girls and for boys. We have analyzed the conditions of occurrence of each aggressive act by a P, or actor; we have divided aggression into a number of theoretically interesting subgroupings; we have also followed up what happens in the protocol in each case where aggression appeared to be instigated but where it did not occur.

The socialization practices in our Formosan village, with all their strict rules and strict follow-through, do not have the effects explicitly aimed at by the parents, even in terms of their own ethno-theory of aggression. Consider our counts of total physical aggression: boys display much more than girls (the distributions hardly touch) but there is not one whit of a relation to age: the early adolescent children are just as frequent in displaying physical aggression as are the youngsters after several years of strict training. Of even more interest (and here the richness of these observation data becomes obvious, at least to me) is the fact that as the children get older there is a highly statistically significant tendency for them to respond to physical aggression with physical aggression. This holds particularly for boys, but there is a strong tendency for girls to do this also as they grow older. There is even a strong tendency (significant one-tailed) for both boys and girls to respond to verbal aggression with physical aggression a higher proportion of times as they grow older. The proportion of times that boys respond to physical aggression with verbal aggression or with a response of "ignoring" falls off with approach to adolescence.

We have divided physical aggression which is instrumental to *getting something else*, from physical aggression which is solely aimed at hurting the other. Fortunately we can report that most aggression we have observed is of the former kind; in fact, it is very heavily the case that children are aggressive when something is in the way of something they wish; "need" aggression (our words for "observed sadism") is rather rare. But these two kinds of aggression are rather independent of one another in Formosa. It is interesting to us that the girls in the sample who are older engage in less *instrumental* aggression than do the younger girls: they tend to "shape up" toward cultural goals in this sense. But there is no effect of age at all on the *physical* need aggression (or, "pure hurt-hitting"). For boys there is no apparent effect of living a long time under strict training at all in our counts of both of these kinds of behavior!

These data also permit us to note some interesting differences in the way different aggressive dispositions become packaged in girls as compared to boys in our sample: girls, for example, who are high in aggression which is *instigated by others* also tend to be high in "need" or *un*instigated sadistic aggression, but these two counts are independent in the behavior of boys. Similarly, girls are consistent within themselves as to uninstigated physical aggression, but not so the boys. Boys, however, who are high on instigated verbal behavior also tend to be high on instigated physical behavior, but not so the girls, and so on.

Pursuing data of these kinds leaves one with two feelings: a) we are horning in on some important distinctions in the socialization of this important behavior system; and b) we are relieved to note, with regard to our Formosan village at least, that for some mysterious reason, the *rate per minute of instigations to aggression* falls off as children become older. Let us hope that this is due to an increase in the cognitive ability to solve instrumental problems before they arise; otherwise life in the village would be a matter of predictable mayhem.

A close look at these data gives one a feeling that socialization practices do not always achieve their aim. As my colleague Robin Williams put it, "life appears to be a matter of bailing out a leaky boat." This is underlined by two other findings in the Formosan study: a) ratings of the aggressiveness of children (as done by natives) do not correlate with our observed counts; and b) while these boys are growing older and retaliating with more and more fierce regularity they are also learning what to _say_ about aggression when asked: they verbally report themselves as less and less prone to fight back when picked on or to start a fight themselves, which means that we must be very careful in assuming any simple relation between self-concept and observed behavior. The moral probably is that we must study both more carefully.

On a General Methodological Trend: Toward a Multiple Check on Hypotheses

Let me comment briefly on the final trend which appears to be growing. _I will call this a trend toward testing behavioral science hypotheses by putting them through a series of intra- and inter-cultural tests_. This trend represents a new fashion, so to speak, in criteria for _proof_. Traditionally, we social psychologists have been content to test our hypotheses by recourse to subgroups within our own culture or by testing a rough sample of individuals who vary on some variables of interest. This is no longer enough. Given a relation obtained between x and y through the old method, we have now added two additional methods of test. First, we can go, as did Whiting and Child, to the Human Relations Area Files or their surrogates, and see whether (given a few assumptions) the relation between x and y still obtains when we are using _tribes_ as our units and the model or average position of the tribes as our measures of x and y. If this works out (or even if it does not) we can go, ideally, to at least one more test of the hypothesis or theorem: does the relationship between x and y still obtain when we study the within society variance in, say, ten or twenty well-sampled tribes or natives?

This pattern is growing in the design of cross-national research. I hope our Conference can do a bit to codify and to extend these strategies and to deepen our grasp of the psychological, sociological and anthropological implications of the various patterns of outcomes that can occur in such a multimethod attack on an hypothesis. X and y may be positively related within a culture, negatively by one kind of cross-cultural test and positively by another. What are the implications?

A Plea for a Clearinghouse on Accumulating Cross-Cultural Information

Finally let me return to educational implications. I would again like to plead for someone to take up the problem of being a clearinghouse for the growing information from cross-national studies of the lands I have been discussing as well as others.

If cross-cultural research is to be done efficiently we need to know the particular advantages of one place in the world compared to another for particular research purposes. We need help from our colleagues in anthropology and sociology in pointing out the various cultures in which the most vital structural features are the same or where they vary systematically, and we need help from those who have done some measuring on at least the first moment of the distributions of psychological variables in a wide array of societies.

At any rate, our own project files and our analyses have collected considerable lore along this line. But this is a very small beginning compared to the kinds of information that we need to help the anthropologically unsophisticated among us to decide where his research interests can best be served! Perhaps we should get together with the anthropologists and sociologists and produce a handbook which would pull together the growing lore along these lines. Where to go for a particular research purpose is still one of the large problems in cross-cultural research. To the area specialist this is no problem, but for the behavioral scientist it is very vital. And I have a sneaking suspicion that it is the interests and products of the behavioral scientist that will provide the long range stability to the area programs. Finally, this clearinghouse can help in making easily and clearly available to the American educators the kinds of information which we need to make our encounters with foreign students more educationally rewarding.

CONFERENCE "WHO'S WHO"

ARRIGO LEONARDO ANGELINI, Ph.D., Professor and Chairman of the Department of Educational Psychology, University of Sao Paulo, Caixa Postal 8105, Sao Paulo, Brazil.

Education: Ph.D., 1953, University of Sao Paulo.

Research Interests: Professor Angelini is now engaged in research on youth in four communities of the State of Sao Paulo, focusing on achievement motivation, interests and attitudes. He has previously collaborated on several cross-national studies comparing North American and Latin American samples. With Bernard Rosen of the University of Nebraska he studied motivation, level of occupational aspiration and various aspects of child rearing. He participated in David McClelland's study of achievement motivation. More recently, he has been working with Professors Peck and Diaz-Guerrero on a cross-cultural study of values.

BASIL B. BERNSTEIN, Ph.D., Head of the Department of Sociology and Director of the Sociological Research Unit, Institute of Education, University of London, Malet Street W C 1, London, England.

Research Interests: Dr. Bernstein has been concerned with developing a theory dealing with the effect of patterns of communication between mother and child on the child's cognitive behavior; he is currently involved in a research project in this area which includes an attempt to train teachers of working class children to modify language communication styles.

ERNEST BOESCH, Ph.D., Professor of Psychology, University of the Saar, Saarbrucken 15, Germany.

Education: Ph.D., 1946, in Psychology, University of Geneva.

Boesch (con.)

Research Interests: Professor Boesch has been involved in studies of socio-cultural factors influencing the genetics of behavior, and in child rearing and child development in Thailand. Currently, he is working on the role of authority in the behavior of children, information problems within the processes of innovation, and the effects of both of these on motivation and aspiration. He is also carrying out a study of innovation and its effects on tribes in North Camaroon with particular emphasis on the positive values the new contents of innovation may possess and how these contents can enter into a group.

BETTYE MCDONALD CALDWELL, Ph.D., Research Associate, Department of Pediatrics, Upstate Medical Center, State University of New York, 766 Irving Avenue, Syracuse 10, New York; and Lecturer in Psychology, Department of Psychology, Syracuse University.

Education: Baylor University, State University of Iowa. Ph.D., 1951, Washington University, St. Louis, Missouri.

Research Interests: Dr. Caldwell is working with a multi-disciplinary longitudinal study of parent-child interaction and personality development of infants and young children. Specific areas of interest include: development of early emotional attachments in the human infant; patterns of infant learning as a function of the patterns of family care; effects on young children of maternal employment and separation; mental development of infants from culturally deprived families; effects of parents' education and/or a controlled day care environment on cognitive and social development of young children.

MARCELLO CESA-BIANCHI, M.D., Professor of Psychology of the Faculty of Medicine of the State University in Milan; and Director of the Istituto di Psicologia Sperimentale della Facolta Medica dell'Universita, Grattacielo Pirelli, Via Fabio Filzi N. 20, Milan, Italy.

Cesa-Bianchi (con.)

Education: M.D., 1949, State University in Milan; followed by training in psychology, Catholic University in Milan, and in neurology and psychiatry, University of Pavia.

Research Interests: Professor Cesa-Bianchi is engaged in studies of the child's perception of authority figures, both intra- and extra-familial, and of the family power structure; children's evaluations of the characteristics of the good teacher at different developmental levels; the development of regional stereotypic ideas, attitudes and values; characteristics and diffusion of sexual taboos and their influences on the development of personality.

REMI P. CLIGNET, Ph.D., Research Associate, Education in Transitional Societies Project, University of Chicago, 5801 Kenwood Avenue, Chicago, Illinois.

Education: Licence, 1958, in Psychology, and Research Doctorate, 1963, in Sociology, Sorbonne, Paris.

Research Interests: Dr. Clignet is conducting a large survey of comparative child rearing practices and family life of two groups on the Ivory Coast of Africa, the Betes (representative of a patrilineal society) and the Aboure (representative of a matrilineal society).

GEORGE V. COELHO, Ph.D., Programme Specialist, Department of Adult Education and Youth Activities, UNESCO, Place de Fontenoy, Paris, France.

Education: Bombay University (India), London University. Ph.D., 1956, in Social Psychology, Harvard University.

Research Interests: Dr. Coelho is engaged in studies of psychosocial development in youth, focusing on the coping behavior patterns of students as they move from late adolescence to adulthood. He is working with the develop-

Coelho (con.)

ment of a Student-TAT which may be used to assess common modes of adaptive competency on a cross-cultural level.

ROGELIO DIAZ-GUERRERO, M.D., Ph.D. Professor, Head of the Section of Experimental Psychology in Personality Measurement, Laboratorio de Psicologia, National University of Mexico, University City, Villa Obregon, Mexico City, Mexico.

Education: University of Guadalajara. M.D., 1943, National University of Mexico. Ph.D., 1947, State University of Iowa.

Research Interests: Professor Diaz-Guerrero is currently working on a cultural study of values with Professor Peck, dealing with the development of conceptions of the love relationship, the respect relationship, and the personal characteristics most sought in men and women by members of different cultures. He is also concerned with a study of child personality development and mental health, as related to cultural factors, and has previously investigated the perception of sex roles in Latin American cultures.

PHILIP J. FOSTER, Ph.D., Associate Professor, Department of Education, University of Chicago, 5835 South Kimbark Avenue, Chicago 37, Illinois.

Education: London School of Economics. Ph.D., 1962, in Comparative Education, University of Chicago.

Research Interests: Dr. Foster is engaged in studies of elite recruitment and social selection in secondary schools in West Africa, with particular reference to Ghana and the Ivory Coast.

MARY ELLEN GOODMAN, Ph.D., Visiting Associate Professor, Department of Psychology, University of Houston; and Visiting Lecturer, Department of Anthropology and Sociology, Rice University, Houston, Texas.

Goodman (con.)

Education: University of California at Los Angeles. Ph.D., in Cultural Anthropology, Radcliffe (Harvard).

Research Interests: Dr. Goodman was a Fulbright Research Scholar in Japan in 1954-55; areas of study have included race awareness and attitudes in young children; values and the transmission of values; social and citizenship concepts, values, attitudes and aspirations in Japanese and American children.

ROBERT J. HAVIGHURST, Ph.D., Professor of Education and Human Development, University of Chicago, 5835 South Kimbark Avenue, Chicago 37, Illinois.

Education: Ohio Wesleyan University. Ph.D., 1924, Ohio State University.

Research Interests: Professor Havighurst is currently studying secondary students and teachers in Brazil, with special reference to social attitudes, socioeconomic factors, attitude toward education and occupational preferences. He has previously done a comparative study of children and adolescents in six American Indian tribes and American white children in a Midwestern community. In the realm of cross-national research he has carried out a study of Buenos Aires and Chicago adolescents. In addition, he has done research on New Zealand children.

ROBERT D. HESS, Ph.D., Associate Professor of Education and Human Development; and Chairman, Committee on Human Development, University of Chicago, 5835 South Kimbark Avenue, Chicago 37, Illinois.

Education: University of California, Berkeley. Ph.D., 1950, in Human Development, University of Chicago.

Research Interests: Dr. Hess' current interests are in the socialization of cognitive behavior, particularly in the effect of family and social class environments upon the development of educability in young children. He is also interested

Hess (con.)

in socialization of children into systems of the society (political, educational, religious) with particular focus on the child's conceptions with regard to authority systems and figures.

LAWRENCE KOHLBERG, Ph.D., Assistant Professor of Psychology and Human Development, University of Chicago, 5835 South Kimbark Avenue, Chicago 37, Illinois.

Education: Ph.D., 1958, in Psychology, University of Chicago.

Research Interests: Dr. Kohlberg is concerned with the development of moral judgment in childhood and adolescence; with concepts of role taking in relation to the development of sociomoral concepts, as influenced by social class, peer group and family structure; and with differences between developmental level and ability notions of cognitive functioning.

WILLIAM W. LAMBERT, Ph.D., Professor of Psychology, Sociology and Anthropology, Morrill Hall, Cornell University, Ithaca, New York.

Education: Brown University, University of Nebraska. Ph.D., 1950, Harvard University.

Research Interests: Professor Lambert's fields of interest have included learning, socialization and child rearing practices, and child development. He is one of the Principal Investigators on the Six Culture Study, which collected data from communities in East Africa, New England, Mexico, the Philippines, India and Okinawa. At the present time he is working with Dr. Leigh Triandis on a factor analysis of interview responses about child training practices obtained from the mothers in these communities.

URSULA LEHR, Ph.D., Lecturer in Human Development, University of Bonn, Bonn, Germany.

Education: University of Frankfurt and Bonn. Ph.D., 1954, in Psychology, University of Bonn.

Lehr (con.)

Research Interests: Dr. Lehr works with Professor Hans Thomae at Bonn. She is involved in studies of authority figures, the role of friends in personality development of adolescents, and attitudes of different age groups toward the future and the past.

BARBARA LEVINE, Ph.D., Visiting Senior Research Fellow, The University College, University of Ibadan, Ibadan, Nigeria.

Education: University of Chicago, Boston University. Ph.D., 1961, in Psychology, Northwestern University.

Research Interests: Dr. LeVine took part in a study of the Gusii of Kenya from 1955-1957; she is currently connected with a longitudinal study of physical growth and weaning practices of the Yoruba in Ibadan, as related to economic and educational levels. She is studying the attitudes of traditional versus Western-educated Yoruba mothers concerning methods of child rearing and attitudes toward marriage and work outside the home.

ROBERT LEVINE, Ph.D., Associate Professor of Anthropology, Committee on Human Development, University of Chicago, 5835 South Kimbark Avenue, Chicago 37, Illinois.

Education: University of Chicago. Ph.D., 1958, in Anthropology, Harvard.

Research Interests: Dr. LeVine's current interests include the relations between child rearing and social structure, particularly in African societies. He is also interested in and has carried out research on aggression and political socialization in African communities.

FREDERICK F. LIGHTHALL, Ph.D., Assistant Professor of Education, University of Chicago, 5835 South Kimbark Avenue, Chicago 37, Illinois.

Lighthall (con.)

Education: Oberlin College. Ph.D., 1957, in Education, Yale University.

Research Interests: Dr. Lighthall is currently studying the development of the reality principle over the pleasure principle in children, with particular reference to cognition; using decision time as a measure, he is focusing on decision-making in concept formation, i.e., the tendency to project one's actions ahead rather than to take immediate action.

ROBERT F. PECK, Ph.D., Professor of Educational Psychology; and Director, Personality Research Center, University of Texas, Austin 12, Texas.

Education: Buffalo State Teachers College, Albany State Teachers College. Ph.D., 1951, in Human Development, University of Chicago.

Research Interests: Professor Peck is working with Professor Diaz-Guerrero on a cultural study of values in Mexico, the United States and Latin America. Other interests at the present time include work on personality assessment, the development of a program in teacher education to maximize their beneficial influence on the mental health of pupils, and a computer analysis of personality.

E. TERRY PROTHRO, Ph. D., Professor of Psychology and Director, Center for Behavioral Research, American University of Beirut, Beirut, Lebanon.

Education: Louisiana College, Ph.D., 1942, Louisiana State University.

Research Interests: Professor Prothro's current interests include studies of child rearing in urban and rural Greece and Lebanon; concepts of self and other national groups among Lebanese children; and research on effects of maternal deprivation of infants in foundling homes.

LEIGH MINTURN TRIANDIS, Ph.D., Assistant Professor of Psychology, University of Illinois, Urbana, Illinois.

Triandis (con.)

Education: Mt. Holyoke College. Ph.D., 1953, in Social Psychology, Radcliffe (Harvard).

Research Interests: Dr. Triandis is concerned with cross-cultural studies of child training practices and their relations to personality development. She was the field researcher in India for the Six Culture Study, and with Professor Lambert she is doing a factor analysis of the mother interviews from all the societies. She is also engaged in the analysis of sexual symbols as related to language structure, and in studies of the relationship between overt and fantasy aggression.

HIROSHI WAGATSUMA, Ph.D., Acting Director, Comparative Research on Delinquency, Institute of Human Development, Tolman Hall, University of California, Berkeley 4, California.

Education: Harvard.

Research Interests: Dr. Wagatsuma is concerned with delinquency and other forms of social deviancy, and he has carried out comparative studies in this area between American and Japanese adolescents. He has also studied the problem of self-identity of the members of the Japanese outcaste group and the problem of conformity to and alienation from society of Japanese intellectuals.

BEATRICE B. WHITING, Ph.D., Lecturer, Department of Social Relations, Harvard University, Cambridge, Massachusetts.

Education: Bryn Mawr. Ph.D., in Anthropology, Yale University.

Research Interests: Dr. Whiting's current interests include cultural differences in child personality as manifested in the interpersonal behavior of children; and cultural concepts of personality and educational process as these affect child training practices. She is now analyzing the data from the Six Culture Study, searching for universal sex, age and setting

Beatrice Whiting (con.)

characteristics, and she is relating the child training practices of the mothers of the children, as reported in interviews, to their children's behavior.

JOHN W.M. WHITING, Ph.D., Professor of Social Anthropology and Director, Laboratory of Human Development, Palfrey House, Graduate School of Education, Harvard University, Cambridge 38, Massachusetts.

Education: Ph.D., 1938, Yale University.

Research Interests: Professor Whiting is one of the Principal Investigators on the Six Culture Study. His current interests include family structure antecedents in the development of sex role identity; and the cross-cultural measurement of masculine and feminine personality characteristics. He is now testing hypotheses in psychological anthropology on the basis of worldwide samples, using the ethnographic literature and field work done by himself and his students.